COUGAR DAM HYDROELECTRIC PROJECT

[No. 83-15]

HEARINGS

BEFORE THE

SUBCOMMITTEE ON FLOOD CONTROL

OF THE

COMMITTEE ON PUBLIC WORKS

HOUSE OF REPRESENTATIVES

EIGHTY-THIRD CONGRESS

SECOND SESSION

ON

H. R. 4541

A BILL AUTHORIZING THE MODIFICATION OF THE GENERAL PLAN FOR THE COMPREHENSIVE DEVELOPMENT OF THE COLUMBIA RIVER BASIN TO PROVIDE FOR ADDITIONAL HYDROELECTRIC POWER DEVELOPMENT, AND

H. R. 7815

A BILL TO PROVIDE FOR THE CONSTRUCTION, OPERATION, AND MAINTENANCE OF THE COUGAR DAM AND RESERVOIR ON THE SOUTH FORK McKENZIE RIVER, OREG., WITH PARTICIPATION FOR POWER BY THE CITY OF EUGENE, OREG.

MARCH 19 AND APRIL 28, 1954

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COUGAR DAM HYDROELECTRIC PROJECT

FRIDAY, MARCH 19, 1954

HOUSE OF REPRESENTATIVES,
COMMITTEE ON PUBLIC WORKS,
SUBCOMITTEE ON FLOOD CONTROL,
Washington, D. C.

The subcommittee met, pursuant to call, at 2:10 p. m., in room 1302, New House Office Building, Hon. Russell V. Mack (chairman of the subcommittee) presiding.

Mr. MACK. The meeting of the Flood Control Subcommittee of the Public Works Committee will now be in session.

The purpose of today's meeting is to give consideration to H. R. 4541 by Mr. Ellsworth, of Oregon.

Without objection, the bill, H. R. 4541, will be inserted in the record, as well as a letter from Robert T. Stevens, Secretary of the Army, giving the approval of the Department of the Army which was sent to the Senate Committee on Public Works regarding a similar bill in the Senate.

(H. R. 4541 and the letter from the Department of the Army are as follows:)

[H. R. 4541, 83d Cong., 1st sess.]

A BILL Authorizing the modification of the general plan for the comprehensive development of the Columbia River Basin to provide for additional hydroelectric power development

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to relieve the critical power shortage in the Pacific Northwest, and in view of the strategic importance of this section of the country in our national defense, the general comprehensive plan of development of the Columbia River Basin, authorized by the Act of May 17, 1950 (Public Law 516), is hereby modified to include the following projects in tributary basins, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 531, Eighty-first Congress:

Cougar Reservoir on South Fork of McKenzie River, Oregon.

Green Peter Reservoir on Middle Fork of Santiam River, Oregon.

White Bridge Reservoir on Middle Fork of Santiam River, Oregon.

DEPARTMENT OF THE ARMY,
Washington 25, D. C., June 16, 1953.

Hon. EDWARD MARTIN,
Chairman, Committee on Public Works,
United States Senate.

DEAR MR. CHAIRMAN: Reference is made to your request for the views of the Department of the Army with respect to S. 87, 83d Congress, authorizing the modification of the general plan for the comprehensive development of the Columbia River Basin to provide for additional hydroelectric power development.

The Department of the Army favors the above-mentioned bill.

The purpose of the bill, S. 87, is to authorize Green Peter, Cougar, and White Bridge Reservoirs in the Willamette River Basin, Oreg., in accordance with the recommendation contained in House Document No. 531, 81st Congress, a report on the Columbia River Basin.

There is an urgent need for additional power development in the Pacific Northwest, the power shortage existing in this region having resulted from phenomenal increases in population and in industries that are especially dependent upon electric power. These projects are part of the huge potential for dependable hydroelectric power in the area. In addition, the Cougar and Green Peter Reservoirs will provide needed flood control for the region; the White Bridge project is a reregulating dam for power purposes only below the Green Peter site.

The cost to the United States for these projects was estimated in 1948 to be $82,064,000, but this amount would probably now be raised as a result of present-day costs.

The Bureau of the Budget advises that while there is no objection to the submission of this report, that office questions whether single project bills should be favorably considered since Congress has customarily taken up from time to time all project reports pending before it and has enacted a general river and harbor and flood-control bill.

Sincerely yours,

ROBERT T. STEVENS, *Secretary of the Army.*

Mr. MACK. Mr. Coon, do you want to get away early?

Mr. COON. Not necessarily.

Mr. MACK. We will call first then Colonel Whipple, who represents the Army engineers, to make a report on this bill.

STATEMENT OF COL. WILLIAM WHIPPLE, CORPS OF ENGINEERS, DEPARTMENT OF THE ARMY

Colonel WHIPPLE. I will mention first the Cougar project, but all three of these projects should be viewed with respect to the comprehensive plan for the multiple-purpose development of the Willamette Basin.

This is one of the oldest developments of a multiple-purpose comprehensive plan by the Corps of Engineers. It was authorized first in 1938 with a series of seven reservoirs, which were authorized for the purpose of flood control, irrigation, and water conservation, and the future development of power.

Later authorizations changed this somewhat and power was first authorized for the Detroit project. We now have some of these projects constructed, namely, Detroit, Fern Ridge, Lookout Point, Dorena, and Cottage Grove. At the time of the general review of the Columbia River in 1947 and 1948, the new comprehensive plan for the Columbia was worked out and published in House Document 531. The largest of the projects that were considered in this plan have since been authorized by the Congress.

For the Willamette Basin, however, there were a total of 15 projects recommended in place of the 7 that had been previously authorized. These projects were not all approved by the Congress at this time.

The projects we are considering today were alternates for projects which were already authorized. The Cougar and Green Peter projects are considered to have been authorized by the Congress as alternates for previously authorized projects, but not to include the purposes of power production.

Coming specifically to the Cougar project, we find it is to be located on the south fork of the McKenzie River. The McKenzie River is one of the largest tributaries of the Willamette. It flows into the

Willamette not far above Eugene. The Cougar Reservoir is on the south fork.

This is a replacement for the previously authorized Quartz Creek project on the McKenzie.

House Document 531 recommended that the Cougar project have authorized the additional purpose of producing 25,000 kilowatts of power, in addition to the flood control, water conservation and storage. The total storage involved will be 231,000 acre-feet, of which 135,000 is flood control, and 47,000 is power.

This project is well adapted for the joint development of power and flood control, and we consider that the inclusion of the power is certainly justified. It happens that the flood season in this particular area is during the winter. All of the major floods that hit the Willamette Basin come at that time.

The winter season is also the season of the greatest power demand, so that the project can generate a great deal of power at the season of the year when it is needed the most.

The storage which is reserved for flood control can also be used for power purposes during the summer, at a time when it is safe to fill the reservoir, as it is not necessary to maintain the flood-control storage at this time.

The total cost of the multiple-purpose project, including the provision of 25,000 kilowatts of power, is $37,400,000. This is relatively cheap for the benefits to be derived. The major benefit is flood control, $1,800,000 annually. The power benefit is valued at $660,000 annually. Together with the miscellaneous conservation benefits, the project has a total benefit of $2,854,000.

The overall benefit-cost ratio is 1.57 to 1.

The project is already authorized for flood control, and conservation and the power element considered as incremental to the flood control is justified by a ratio of more than 2 to 1. So there is an overall economy in adding the power features to this fine flood-control reservoir.

Mr. MACK. Are you speaking now only of the Cougar Dam?

Colonel WHIPPLE. Yes, sir.

Mr. MACK. What is the total power generation there, Colonel?

Colonel WHIPPLE. 25,000 kilowatts installed capacity, which will provide 19,900 kilowatts of firm power.

Mr. MACK. How much installed?

Colonel WHIPPLE. 25,000.

Mr. MACK. Is there any intention by the Army engineers to go ahead with the construction of this proposed dam at any time in the near future?

Colonel WHIPPLE. That depends on the progress of planning, and it also depends on the prgoress of proposals that have been made for the construction of this dam by a so-called partnership arrangement with the Eugene Water and Electric Board. A separate bill for this purpose has been introduced, and of course it depends on the action of the Congress as to whether the dam will be constructed under one or the other of these plans.

Mr. MACK. I understand the main purpose of Mr. Ellsworth in his bill is to open the way so that the local utility can appear before the Federal Power Commission to request an opportunity to build the dam. Is that correct?

Colonel WHIPPLE. I believe that is substantially correct. But I think that Mr. Ellsworth can probably tell you more about that when he speaks to you.

Mr. MACK. If a local utility should go ahead and build the power phase of this dam, would that in any way add to the Federal cost?

Colonel WHIPPLE. No, sir. If that arrangement is made that will reduce the Federal investment because the sharing of the cost of this project would reduce the amount that the Federal Government would otherwise have to put into a flood-control project construction.

Mr. MACK. In other words, it would actually save money for the Federal interests taking over this dam if the local utility should take the construction of the power end of it?

Colonel WHIPPLE. That is correct. It would require less investment in Federal funds for the project.

Mr. ANGELL. It will require, however, authorization by the Congress for the Federal portion?

Colonel WHIPPLE. Yes, sir; an authorization to effect that is still required.

Mr. ANGELL. And an appropriation, too, of course.

Colonel WHIPPLE. Yes, sir.

Mr. MACK. Are there any other questions of Colonel Whipple?

Mr. TRIMBLE. Colonel Whipple, do you say it will require an authorization of flood control and power before the Eugene people can go down to the Power Commission to get permission to install the power part of the project?

Colonel WHIPPLE. Yes, sir.

Mr. TRIMBLE. In other words, we would have to authorize you to build the whole thing?

Colonel WHIPPLE. This bill before you will authorize the project to be planned and constructed as a multiple-purpose project, including power, rather than a project for flood control and water conservation. There will be a separate and additional authorization required in order to authorize this participation by the water board.

Mr. TRIMBLE. That is where I am confused about it. Let us just forget now about the Eugene folks wanting to put in whatever is agreed to. Ordinarily you would authorize this as a hydroelectric power project?

Colonel WHIPPLE. Yes.

Mr. TRIMBLE. Flood-control and hydroelectric power project.

Colonel WHIPPLE. Yes.

Mr. TRIMBLE. Do you say that there needs to be a further authorization in case the Government wants to enter into a contract with Eugene?

Colonel WHIPPLE. That is correct. This authorization proposed today will put into effect the recommendations that the Corps of Engineers made in 1948 that this project shall be built as a multiple-purpose project, including power, and that is all this proposed bill will accomplish.

In order to have the further arrangement of the partnership construction, additional authorizing legislation will be required, which legislation has been already introduced.

Mr. MACK. Unless we approve this as a multiple-purpose project, then the Eugene people would have no right to go before the Power

Commission and ask for a franchise to build the powerplant there. Is that right?

Colonel WHIPPLE. It is not so much that, but the Corps of Engineers would not be authorized to participate in the planning and construction of it.

Mr. MACK. I see. If the Federal Power Commission were to grant permission for the Eugene people to build power facilities there, those would have to be constructed under the Army engineers?

Colonel WHIPPLE. Yes, sir. Because the Federal Power Commission has taken the attitude that the law does not allow the granting of a license to a private power company which would conflict with a project which has been authorized as a Federal project. So if any private or public utility were to apply to construct a power facility that would interfere with the Cougar project as now authorized, the Federal Power Commission would refuse to grant that license. Therefore authorization from the Congress is required to permit that.

Mr. MACK. The Chair notes that the Ellsworth bill provides also for the authorization of the Green Peter Reservoir and the White Bridge Reservoir.

Colonel WHIPPLE. Yes.

Mr. MACK. As multiple-purpose projects. Can you explain those two?

Colonel WHIPPLE. Yes, sir. These projects, Cougar and Green Peter, are very similar. The Green Peter project is authorized as a flood-control project as one of the alternatives for the Sweet Home project on the Santiam River, which was found to be infeasible to construct on account of the development of the town since the time it was authorized.

This project was also recommended for the installation of power. In this case the reservoir is somewhat larger. It has a total storage of 360,000 acre-feet and an installed capacity of 81,000 kilowatts was recommended at a low load factor.

However, this would cause fluctuations in the Santiam River, which are extremely undesirable, and would change its stage as much as 15 feet in the stream below the dam. It was decided that a reregulating dam is required below that point. That is the function of the White Bridge project. It is to serve as a reregulating dam below the Green Peter Dam. The Green Peter project would have a head of 315 feet, and would have a storage of 360,000 acre-feet. The White Bridge project is 93 feet high and will have just 1,850 acre-feet of storage, which is enough to iron out these daily fluctuations caused by the variation in releases from the Green Peter. The total installed capacity between the 2 will be 96,000 kilowatts, which will create 67,700 kilowatts of firm power from the 2.

Mr. MACK. Does the White Bridge Reservoir have any power in it at all?

Colonel WHIPPLE. Yes, sir. A total of 15,000 kilowatts of installed capacity with 1 unit.

Mr. MACK. That will not be firm power?

Colonel WHIPPLE. Yes, sir. It will operate in conjunction with the Green Peter project. Together they will create 67,700 kilowatts of firm power out of an installed capacity of 96,000 kilowatts.

Mr. MACK. Are there any questions?

Mr. WATTS. I would like to clear up something.

Colonel, there has already been authorized a general comprehensive plan for the development of the Columbia River Basin. Is that right?

Colonel WHIPPLE. The larger projects in that plan were authorized individually. The plan itself as a plan has never been adopted by the Congress.

Mr. WATTS. The plan was submitted and various segments of it have been authorized?

Colonel WHIPPLE. Yes, sir.

Mr. WATTS. But there is no authorization at the present time with regard to these three dams you are taking about?

Colonel WHIPPLE. Two of them are authorized as flood control dams. The third one, White Bridge, was not authorized at all. It is merely an adjunct of the installation of power at the Green Peter project.

Mr. MACK. None of the three are authorized as power projects?

Colonel WHIPPLE. No. sir.

Mr. WATTS. I assume then that the language in the bill which says, "In accordance with the recommendations of the Chief of Engineers in House Document Numbered 531,"—that document covers not only flood control, but power and other things too. Is that right?

Colonel WHIPPLE. That is right. House Document 531, the main volume of it, without the appendixes—and I brought a copy of it over here because it is so often referred to that I thought I might have to present it—that report does recommend these projects practically identically as I have talked about them today.

Mr. WATTS. But that has not been approved by the Congress?

Colonel WHIPPLE. The Congress did not approve it. It was an earlier authorization which authorized two of these as flood-control projects.

Mr. WATTS. And none of these 3 dams have been authorized except 2 of them for flood control, you say?

Colonel WHIPPLE. Yes.

Mr. WATTS. In order to allow an outside agency such at the one talked about here, to construct them, where there is an authorization, would that have to be deauthorized so far as flood control is concerned?

Colonel WHIPPLE. Not exactly deauthorized, but there has to be a supplemental authorization. A special bill will be required for each such arrangement in order to allow the Federal Power Commission to grant them a license and to state the conditions under which the participation between the Government and the private company will be allowed.

Mr. WATTS. Does this bill we have before us accomplish that?

Colonel WHIPPLE. No, sir. It does not.

Mr. WATTS. What does this bill accomplish?

Colonel WHIPPLE. This bill authorizes the construction of the projects as multiple-purpose projects and allows the Corps of Engineers to proceed with their planning on that basis. It would at a later date allow the Congress to appropriate money for their construction under this authorization if there were to be no other authorization introduced which would make the partnership arrangement that we have been talking about.

Mr. WATTS. In other words, the purpose of this bill then is to put the authorization in a multiple-purpose construction condition? What I am trying to say is this: The purpose of this bill is to authorize the Army engineers to construct it for multiple purposes.

Colonel WHIPPLE. That is correct.

Mr. WATTS. And later on if some individual or outside agency wanted to construct it they would have to authorize that by a separate bill?

Colonel WHIPPLE. That is correct.

Mr. WATTS. Which permitted them to share with the Army engineers, with them taking the power feature and you taking the flood-control and navigation features?

Colonel WHIPPLE. Yes, sir. I might add that similarly to Cougar we have anticipated a bill may be introduced to allow the construction of this Green Peter project as well by such an arrangement.

Mr. WATTS. A bill of that nature would be something like the one we had on Priest Rapids?

Colonel WHIPPLE. Yes, sir. That is a case of the same thing.

Mr. WATTS. That is all.

Mr. MACK. There is no present intention on the part of the Army engineers to construct the power facilities in these particular locations, is there?

Colonel WHIPPLE. We have no intention now of starting the construction of these. In any event, a period of planning would be required. There is no request for planning funds for either of them in the current budget. The question of their construction by outside agencies will presumably be settled by the Congress before we come to the point where we need to decide who will construct them.

Mr. MACK. What is the approximate cost of the Cougar project for power, do you know?

Colonel WHIPPLE. It will cost $37,400,000.

Mr. MACK. That is just the power phase of it?

Colonel WHIPPLE. No, sir. That is the complete project, including the installation of power.

Mr. MACK. And the Green Peter Dam?

Colonel WHIPPLE. Green Peter is $49,861,000 for the Green Peter project itself; with $8,504,000 for the White Bridge project, or a total of $58,365,000 for the 2 projects.

Mr. MACK. For the three projects the cost would be about $95 million?

Colonel WHIPPLE. Yes, sir.

Mr. MACK. What percentage of that would be power?

Colonel WHIPPLE. You cannot tell that without a cost allocation.

Mr. MACK. The major part, though, would be for the cost of the power, would it not?

Colonel WHIPPLE. No, sir. I do not believe that is correct. In the case of the Cougar project, which will cost $37 million, the flood-control project without power would cost approximately between $30 million and $31 million, so that the major portion of that cost is required by flood control.

In the case of the Green Peter project the cost for flood control alone of that project is $37 million, as compared to the estimated $49,800,000 for the project including power. So that even including White

Bridge, the addition of power would not double the cost required for the flood-control project. It adds between $6 million and $7 million for one project, and about $12 million to the other.

Mr. MACK. Do the engineers believe that if private or public local companies should build these power facilities, that the Government would save money on the flood-control costs?

Colonel WHIPPLE. Very definitely.

Mr. MACK. A substantial sum of money?

Colonel WHIPPLE. I do not think we could say that until we actually have more settled arrangements as to what will be involved. There will be a substantial saving, but just how great that would be we can't tell at this time.

Mr. MACK. There would be a saving on each of these three locations?

Colonel WHIPPLE. On two of these locations; yes, there would. In fact, one of them is required for power only, which is the White Bridge project. If constructed by private interests there would be no point in the Government putting any flood-control money in the White Bridge project. It is an adjunct for power only, and would never be required for any other purpose.

Mr. MACK. These are not very large dams. The total amount of installed capacity will be something in excess of 90,000 kilowatts, as I understand it.

Colonel WHIPPLE. From one point of view these are extremely high dams. One of them has a head of 325 feet, and the other a head of 450 feet. They are unusual dams. They will be very high head, rock-fill dams in relatively small valleys, with a much greater effect on flood control than you would think in proportion to their drainage area.

Mr. MACK. The three dams altogether will produce about as much power as, say, Detroit or Lookout Point?

Colonel WHIPPLE. Yes, sir. It is closer to Detroit. The Lookout Point project produces considerably more than those three projects together.

Mr. ANGELL. Colonel Whipple, House Document 531 is founded on the 308 report?

Colonel WHIPPLE. It is referred to as a review 308 report. Yes, sir.

Mr. ANGELL. Is there any proposal for private or municipal participation in the Green Peter Dam?

Colonel WHIPPLE. There has been no formal proposal made. There has been no bill introduced and no formal proposal.

Mr. ANGELL. Is Eugene interested in that?

Colonel WHIPPLE. No, sir. The Eugene Water and Electric Board is interested in the Cougar project, and they are not interested in the Green Peter project.

Mr. ANGELL. Are there any private interests interested in the power at White Bridge Reservoir?

Colonel WHIPPLE. Yes, sir. If anyone makes any arrangement for partnership on the Green Peter project it will include the White Bridge reregulating dam, which will be built as an adjunct to that project.

Mr. ANGELL. The allocation of costs to power and other purposes is the same formula as was used at McNary?

Colonel WHIPPLE. Yes, sir. We will use the same formula in all of these three cases, as was used at McNary.

Mr. ANGELL. At the McNary Dam they have allocated most of the cost to power.

Colonel WHIPPLE. Yes, sir. But that formula does not always have that result. In some cases this same formula which is called the separable-costs-remaining-benefits method may apply the greater part of the cost to flood control. Depending on what the features of the project are and the alternate means of obtaining the power for flood control, and the benefits produced for each purpose by the project in question. So there is no implication at all that the proportion of costs allocated to power in the McNary case, indicates what this formula will allocate in the case of Cougar or Green Peter. In fact, I can say right now that the greater part of the costs of the Cougar project will be allocated to flood control under this separable-costs-remaining-benefits formula.

We have not completed that allocation, but we have made some preliminary studies, and that is the way it will work out in this case.

Mr. ANGELL. So the dam is necessary either for power or flood control. How do you allocate the costs in the construction of the dam to those two separate interests?

Colonel WHIPPLE. In order to do that we have to consider in the first place the cost of the dam for flood control only, which would have to be built if you did not build the multiple-purpose project. We then have to consider the benefits to flood control, which in this case are the greater part of the benefits of the project and are much greater than the costs of building this alternate purpose dam. Then we have to consider the alternate which would be built in the case of power only, without flood control.

In the event this project were not built the company would have to go to other alternate sources of power, which is another limit on which the allocation has to be based. Then we have to consider the remaining benefits over and above the separate costs of each purpose of the project and distribute the joint costs of the project, which remain—the remaining joint costs—between these project functions in proportion to the remaining benefits.

Mr. ANGELL. Should not power participate in the cost of the construction of the dam?

Colonel WHIPPLE. Yes, sir. In the case of the Cougar project, the entire cost of the conduits and penstocks, and other features which will not be required except for power, will be paid 100 percent by power.

Mr. ANGELL. These are solely for power, and they will be paid for by power. But in joint uses, such as the dam, you cannot have either power or flood control without the dam, and there will have to be some equitable rule for apportioning that cost as between power and flood control?

Colonel WHIPPLE. That is correct.

Mr. ANGELL. In other words, if you are going to build the flood control without power it will cost a certain amount of money. It would not be fair to say you are going to spend that money anyway and therefore only the additional cost of the installation of power should be borne by power; because that is a byproduct which is not costing you very much if the Government keeps it for its revenue from power sales.

Colonel WHIPPLE. Sir, we have to consider we can't assume either flood control or power as a byproduct. We apply this method in such a way that it assumes all purposes are equally essential, and it does not consider either one of them a byproduct of the other. So we are treating flood control and power exactly on a par; having allocated to each purpose the costs that are required solely for that purpose, the remaining cost which are called the joint costs are then allocated in proportion to the benefits over and above the benefits required to justify the separable costs.

The result of that in the case of the Cougar project is that over and above the power separable costs, a portion of the cost of the dam, but not a very large portion, will be borne by power, and the remainder of the dam cost will be borne by flood control.

I am sorry I cannot give you the exact figures now but that computation is still being worked on.

Mr. ANGELL. Of course, the merits of the project would revolve upon the allocation of the division of the costs so far as the Federal Government is concerned.

Colonel WHIPPLE. Yes, sir. That is true. But for the purposes of today, the overall benefits of the project are the most important. That is, we know now in the case of the Cougar project that the overall benefits for power, flood control, and water conservation purposes are 1.57 times the project costs. At such time as we can come before you to testify regarding the partnership proposal, which has been now introduced by Mr. Ellsworth—at that time we will be prepared to give you a cost allocation and say how that will work out as between flood control and power, and discuss in detail how it was arrived at.

Mr. ANGELL. These questions we are discussing now are not really involved in this project we are considering?

Colonel WHIPPLE. I think that is correct, although we normally like to have the cost allocation ready for the information of the committee at the time we testify, and I regret that we have not completed it so we can answer all of your questions at this time.

Mr. ANGELL. That is all, Mr. Chairman.

Mr. SCUDDER. Colonel Whipple, did I understand that the entire project was estimated to cost about $95 million?

Colonel WHIPPLE. That will be for all three dams together.

Mr. SCUDDER. Which would be a maximum for the development of power as well as flood control?

Colonel WHIPPLE. Yes, sir. That is correct.

Mr. SCUDDER. What is the kilowatt production of the contemplated project?

Colonel WHIPPLE. There will be 25,000 kilowatts of installed capacity in the Cougar project at 80 percent load factor. This is high load factor power, and substantially the average load factor at which power is used in the region. In the Green Peter-White Bridge project there will be 67,700 kilowatts of firm power produced, which will be at a 40 percent load factor. That is, this provides peaking power available over and above the energy produced.

Mr. SCUDDER. I might say, Colonel, I am a little prejudiced in favor of private enterprise. Would this be attractive to a power company to develop at the cost involved?

Colonel WHIPPLE. I can say, sir, that I do not even need to use a condition. I can say it is attractive.

Mr. SCUDDER. It is attractive?

Colonel WHIPPLE. It is attractive.

Mr. SCUDDER. Why should the taxpayers put money into a project that free enterprise is able to develop without taxpayers funds? Except that I realize generally when a permit is granted you do not have the full control that you would like to have over the flood-control features in the project.

Colonel WHIPPLE. Yes, sir.

Mr. SCUDDER. However, if it is attractive, why then would it not be well to permit a power company that would be willing to invest private citizens' money in the project, with a provision that you would retain a certain degree of control in order to take care of the flood conditions that might exist? I cannot for the life of me see where the Federal Government has any reason or obligation to expend taxpayers' money on a project that could be built with private money.

I feel that in California the Pacific Gas & Electric Co., which is a private utility company, without one penny of the taxpayers' money being involved but pay taxes, have done a greater job in flood control in California than has the Central Valley project, because they have impounded more water and held back storm water which has greatly assisted in flood control.

If this is a project that will encourage private capital to invest and develop, it will broaden the tax base to the benefit of the people in the area concerned, then I think we are working toward a realization of something that I am very much in favor of. If private enterprise can step into the breach and assist the taxpayers of our country, I think it is well that we cooperate with them as much as possible.

Colonel WHIPPLE. Sir, I believe we are taking steps that will coincide with your objectives. In these projects, of course, the flood-control feature is very important. In the Cougar project the flood-control benefits are three times as great as the power benefits; so that the power is much less important than the flood control.

In the case of the Green Peter and White Bridge projects the benefits to power are slightly greater than flood control alone but less than the flood control and other water conservation benefits for which the project was authorized.

So these are in no sense power projects, with a minor amount of flood control added. They are truly multiple-purpose projects which could not be undertaken by any agency without full participation in flood control by the Government. This plan is something that is tremendously vital and the basic authorization for these projects is as flood-control projects. However, the participation of private capital in the construction of the Cougar project has been pretty well worked out, and this bill that Mr. Ellsworth introduced for the Cougar project has been discussed very thoroughly, not only with the Corps of Engineers, but with the Federal Power Commission. It has been praised by the Secretary of the Interior and mentioned favorably by President Eisenhower.

There is a great deal of interest in obtaining a partnership arrangement for the Green Peter project, and while I would prefer not to be the one who would discuss that, I can say that the Corps of Engineers is cooperating with that policy, and at such time as these things are proposed we stand ready and willing to work out with the power

people an arrangement that will protect flood control and allow the participation of private capital in the construction of the power portions of the investment.

Mr. SCUDDER. Thank you.

Mr. MACK. Are there any other questions of Colonel Whipple?

(No response.)

Mr. MACK. What is the demand for power in this particular region of the State of Oregon?

Colonel WHIPPLE. The demand is very great for power in the entire Pacific Northwest. In this Willamette Basin the population of the basin increased approximately 45 percent since the start of World War II, and there has been a tremendous growth of industry as well as of population. The power demand is growing by leaps and bounds.

The adequacy of the power supply is of such importance that I am sure Mr. Mack is asking me the question only in order to bring it out into the record, as I happen to know he is extremely vitally concerned in his capacity as a Congressman, and it is not for lack of knowledge of the subject, which he could develop better than I.

The four Governors of the Pacific Northwest have recently gotten together to form a power policy committee, and they consider as one of their most important objectives as governors to develop jointly the means of providing adequate power for the growing industry and commerce of the region. There is no adequate supply of coal in the Pacific Northwest, so that alternative steam plants such as are prepared to take up the load in other parts of the country, are more expensive and cannot compete with the hydro developments.

There is a critical shortage in the immediate vicinity of these dams, which is the highly populated Willamette Valley, and the power will be used and needed in the Willamette Valley itself close to the load centers. The transmission cost will be relatively low.

The Green Peter project is closely adjacent to the powerlines both of the Bonneville Power Administration and the Mountain States Power Co. The Cougar project is producing power that will be required in the immediate vicinity of Eugene, Oreg. If this partnership arrangement goes through, its power will be sold through the Eugene Water and Electric Board, which is a municipal corporation.

Mr. MACK. What is the population of this area that surounds Eugene?

Colonel WHIPPLE. The population of the entire Willamette Valley is approximately 900,000. The population in the immediate vicinity of Eugene is about 100,000.

Mr. MACK. A population of that size would consume all of the output of all three of these dams at a point very close to the sites, would it not?

Colonel WHIPPLE. Yes, sir. It certainly will. Besides Eugene there are the towns of Albany, and Salem, which is the State capital, and Corvallis. And, of course, we have the very large load center of Portland, which is at the extreme lower end of the Willamette Valley.

Mr. MACK. Are those communities highly industrialized?

Colonel WHIPPLE. They are becoming industrialized. There are logging and lumber processing factories. There are coming into being machinery and fabricating establishments of different sorts. It is a mercantile and transportation center. The demand for power west

of the Cascade Mountains is very great; whereas the supply of power is greatest in the Inland Empire region east of the Cascade Mountains.

So these particular dams will produce power at a time of the year when it is most required, and in the immediate vicinity of the power market. They are very well placed for that purpose.

Mr. MACK. I understand that in close proximity to the cities of Eugene and Albany there is one of the largest timber stands in the North American Continent. Is that correct, Colonel?

Colonel WHIPPLE. Yes, sir. The eastern part of the Willamette Valley has particularly fine stands of Douglas fir, many of which are being placed on a perpetual-yield basis. In addition to the producing of lumber, the lumber processing and veneer production from these stands of timber is becoming increasingly important, so that wood products and paper products produced from these timber stands are being fabricated. These are all taking increasing amounts of power in proportion to the amount of lumber that is cut. These are among the finest remaining stands of timber in the country, and are nowhere near exhaustion. In fact, we anticipate that they ought to be put on a permanent basis.

Mr. MACK. If the Congress should enact this legislation and pursuant thereto the Federal Power Commission should grant a permit to some private or local utility to build these three hydroelectric projects, what agency of the Government would determine the allocation of costs as between flood control and power generation?

Colonel WHIPPLE. I think that would depend on the form of the legislation, sir. Many of the cost allocations in the Pacific Northwest have been made by the Federal Power Commission. Under the partnership proposal covered by Mr. Ellsworth's bill, the cost allocation would be made, as I recall it, jointly by the Corps of Engineers and the Federal Power Commission.

Mr. MACK. If the Congress should pass this particular bill, could the local utility or the private power company go before the Federal Power Commission immediately and ask for a permit to build these dams?

Colonel WHIPPLE. No, sir. They could not.

Mr. MACK. What would be the procedure after the passage of this bill?

Colonel WHIPPLE. They would still have to get specific authorizing legislation covering the terms of the arrangement they wished to make and obtaining the authority of the Congress for it.

Mr. MACK. At that time Federal agencies would specify the division of costs in that legislation?

Colonel WHIPPLE. Either that, or probably you would specify the agency which would have the responsibility of finalizing the cost allocation.

Mr. MACK. And would Congress have to pass additional legislation authorizing the appropriation of money for the Federal Government to carry out its part of the flood-control features of these projects?

Colonel WHIPPLE. Yes, sir. There would have to be planning funds and construction funds allocated and appropriated in the usual way for the construction of the flood-control portions of the dams.

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Mr. MACK. In other words, the Congress will still have pretty close control and supervision of this project until the point where it comes to actual construction?

Colonel WHIPPLE. That is correct.

Mr. TRIMBLE. Colonel Whipple, let us say in this Cougar project that you own the flood-control end of it and I own the power end of it. We do not agree. You want to hold water and I want to turn it loose to generate power. Getting back to what Mr. Mack has said, who is going to be the boss?

Colonel WHIPPLE. That has to be specified in the legislation covering the particular arrangement in question. That sort of question is one of the reasons why there must be specific legislation covering each case.

In accordance with Mr. Ellsworth's bill the Federal Government would own and operate the dam itself, and would have the authority to control the releases in the interests of flood control. The operation of the releases subject to the flood-control requirements would be made in the interests of the production of power as required by the power company. In any such arrangement, there will have to be a certain relationship authorized by law, and there has to be a certain amount of faith between the parties concerned, that they will be reasonable in the application of that law.

Any company coming into such an arrangement has to have confidence in the Federal agency with whom it proposes to operate.

Mr. MACK. This bill in substance merely gives the local utility and the engineers an opportunity to be given discretion to arrange terms and details under which other legislation might be considered?

Colonel WHIPPLE. Yes, sir. It will establish the intent of the Congress that these projects are to be constructed as multiple-purpose projects. At the present time their authorization does not correspond to the plans that have been drawn for those projects, and which were submitted in House Document 531, and which we are again presenting to you today.

We feel that the legislation is desirable because it authorizes the change of the plan. It does not yet authorize the legislation by which private capital can participate, but it clears the decks for that action by clarifying what type of project it is that Congress desires authorized.

Mr. MACK. What is the benefit-cost ratio as to all three projects for hydroelectric power and flood control, Colonel?

Colonel WHIPPLE. Cougar is 1.57. For the combination of Green Peter and White Bridge it is 1.44. So that the benefit-to-cost ratio combined for all 3 is very close to 1.5 to 1.

Mr. MACK. Are there any further questions of Colonel Whipple?

(No response.)

Mr. MACK. We will hear next from Congressman Ellsworth, who is very much interested in providing more power facilities in the Pacific Northwest, and particularly in the State of Oregon.

Congressman Ellsworth.

STATEMENT OF HON. HARRIS ELLSWORTH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

Mr. ELLSWORTH. Mr. Chairman and members of the committee. I would like first of all to clarify as much as I can the situation with respect to the two bills that have been discussed by Colonel Whipple.

The bill before the committee at this time is the bill H. R. 4541, which has only the purpose as stated by Colonel Whipple, that is, its only purpose is to authorize the 2 dams or, rather, the 3 dams, with the White Bridge Reservoir being an auxiliary to the Green Peter Reservoir. It is to authorize those projects as multiple-purpose projects, which means that the Government may construct them for all of the purposes, including power.

It is my thought in asking the committee to include this authorization in the omnibus bill that regardless then of what action the Congress takes with reference to the partnership proposals, these projects can be built because they are so vitally needed for flood control. Then they can be built in the normal way just as we appropriate for and construct other flood control and multiple-purpose projects.

The point is, with this authorization included in the omnibus bill, it puts these projects on a level with all of the flood control multiple-purpose projects in this Willamette Basin area. Then what is done in the future is something else. But we do have the projects ready for construction in the orderly plan for the development of that whole basin.

Without this simple authorization the planning and construction, or the appropriation, could not go ahead until this other legislation we have heard discussed, namely, the partnership type of legislation, was acted upon by the Congress. I am hopeful that perhaps one or more of these bills may be enacted this session, but there is no conflict between the two. In other words, the partnership is something else. It is an arrangement whereby the Government can cooperate with others, whereas this bill before you now is a simple authorization.

There is one question, though, that I would like to have Colonel Whipple clarify, for my benefit at least, and I think it would be appropriate to be a part of the record. I understood your testimony to be, Colonel Whipple, that the Cougar project now calls for 25,000 kilowatts. That means without a reregulating dam below it. Is that correct?

Colonel WHIPPLE. That is correct.

Mr. ELLSWORTH. It occurs to me, then, that we are possibly not accomplishing what I had in mind, if we authorize only Cougar on the basis of 25,000 kilowatts when, as a matter of fact, the efficient development of that project for power would require a reregulating dam also. Is that correct?

Colonel WHIPPLE. Sir, there is no conflict in that. We know that the Eugene Water and Electric Board, if it participates in this partnership, will want to construct this project with a lower load factor and higher installation of 35,000 kilowatts, instead of 25,000 kilowatts. That may require having a reregulating dam below on account of the greater variations in water. That does not really matter, because of the fact that that can be taken care of in detailed planning.

The cost of the reregulating dam and the increased powerhouse cost would be separable power costs they would be required to pay in any event.

We regard the authorization that you have requested in this bill to be sufficiently flexible under the normal procedures so that we could go ahead and plan when your partnership-arrangement bill is passed for the exact installation they are talking about now.

Mr. ELLSWORTH. Let me see if I understand you correctly. With the passage of this simple authorization we are now discussing you could go ahead with your planning just as well as if the other bill had been enacted? In other words, you are not going to be delayed in your planning for power and multiple-purpose operation at Green Peter if the partnership bill does not happen to be enacted at this session?

Colonel WHIPPLE. I believe so, although the needs of the Federal system and the Eugene Electric and Water Board system are not exactly the same. If they were going to build the dam they would not build exactly the same electrical installation that the Government would put in if we are going merely to add the power to the Bonneville Power Administration system. But that is a matter that would not affect the planning until a later stage. By that time we will know whether we will be prosecuting it as a Federal project or as a partnership project.

Mr. ELLSWORTH. But so far as our going before the Appropriations Committee and the Bureau of the Budget is concerned, and this committee, and asking for some planning money for the Cougar Dam, if this authorization is passed by the Congress that gives you an opportunity to plan this dam, regardless of what becomes of the power after it is generated?

Colonel WHIPPLE. That is correct.

Mr. ELLSWORTH. I wanted to settle that. Thank you, Colonel.

Now, Mr. Chairman and members of the committee, reference has been made to my other bill, 7815, which is to provide for the construction, operation, and maintenance of Cougar Dam, with participation for power by the city of Eugene.

I am hopeful that this committee will be sufficiently interested in that suggestion so that in the near future you will hold hearings on that bill itself.

As Colonel Whipple has stated, the engineers have not announced their tabulation, so it is not in order for me to request now that that project or that bill be heard. But since reference has been made to it I would like to direct the attention of the committee to that bill, H. R. 7815, and express the hope that we might have a hearing on it in the relatively near future.

Mr. MACK. A hearing will be held on that bill in the near future, as soon as some of the flood-control matters now before the committee are disposed of.

Mr. ELLSWORTH. Thank you, Mr. Chairman.

Now, with reference to the bill before us, the authorization of the two dams as multiple-purpose projects and the White Bridge as a part of the Green Peter power development, the principal objective of the local interests in our area at the present time, even though power is needed and we want to see the power developed from these dams, and

water running downhill generates power so it would be foolish not to have power in the projects—nevertheless, the principal need of these two projects is for the flood control. Two gentlemen have traveled out here from Linn County, Oreg., to appear before your committee. They will give you the local story as to the desperate need in the Willamette Valley for having these two projects completed.

We are in a strange position there with respect to both of these projects. They are almost identical in their physical aspects, although separated by some 30 to 35 miles. The completion of 1 dam on 1 fork of the Santiam River has had the result of jeopardizing thousands of acres of land in the forks of the north and south branch. So until we can construct the dam on the south fork of the Santiam in order to balance up the two streams, the flood loss in that area is admittedly more than it was there before any construction took place.

One of the witnesses here will go into that in more detail at this time. That is, unless Mr. Sam Coon of Oregon, who is here, would like to make a brief statement regarding this bill. If so, then I will introduce the witnesses from Oregon later.

Mr. MACK. Before you leave the stand, Mr. Ellsworth, let me ask you this question: Your bill does not designate who is to secure the permit to build the power project, does it?

Mr. ELLSWORTH. No. It is a simple authorization and merely authorizes the projects to be constructed as multiple-purpose projects including power—nothing more.

Mr. MACK. After the passage of this legislation, if it is passed, then either a private utility or a public utility could seek to obtain rights to build this project?

Mr. ELLSWORTH. That is correct. As a matter of fact, that proposal has already been made by the public utility at Eugene. Their people came back to Washington and the bill 7815 was developed for that purpose. That bill is before the committee, the one which you mentioned a moment ago.

Lately, in the last 2 or 3 weeks, the people in the Linn County area, which is the region affected by the Green Peter project, have discussed with the principal privately owned utility in that area the possibility of that utility spending $28 million to $30 million in connection with the Green Peter project, with the thought that it might be more attractive to the Congress to construct the Green Peter project if it did not require a total sum for power and flood control both. So the Green Peter project is also strictly eligible for a partnership plan.

However, that is something for the determination of Congress later.

Meanwhile, the planning for both Green Peter and Cougar can go ahead. If the Congress determines the partnership plans are right, and adopts them, then the power will be handled in that way.

If it should happen as time goes on that Congress should decide not to adopt the partnership plan, then this authorization is still in existence and planning has gone forward on it and the projects can be constructed.

Mr. MACK. This bill does not bar anyone from making an application to build these dams, does it?

Mr. ELLSWORTH. Not at all.

Mr. MACK. And if the Cougar application should be approved by the Federal Power Commission, what period of time would be required to complete that dam and have it in operation?

Mr. ELLSWORTH. I have not heard an estimate on the construction time of that dam.

Colonel WHIPPLE. Including the planning, it would be 4½ to 5 years.

Mr. MACK. The same would apply to the other two?

Colonel WHIPPLE. Yes, sir.

Mr. MACK. Are there any questions?

Mr. WATTS. I would like to ask a question.

Mr. MACK. Mr. Watts.

Mr. WATTS. You say your other bill is H. R. 7815?

Mr. ELLSWORTH. Yes, sir.

Mr. WATTS. You cannot proceed with 7815 until this one is enacted. Is that correct?

Mr. ELLSWORTH. No, sir. As a matter of fact, each stands on its own feet.

Mr. WATTS. They do?

Mr. ELLSWORTH. If the little bill, H. R. 4541, the simple authorization bill, is passed, then the engineers can go ahead and obtain planning money and proceed to developed the project. If this authorization is not passed, then the planning and development of the Cougar project, or both of them, must await further legislation.

Now, 7815, the partnership bill, merely provides that the Government may enter into a contract with the Eugene Water and Electric Board wherein the Eugene utility pays the costs attributable to power, plus the remaining benefits-to-costs allocation plan, as set out in what I believe is referred to generally as the Green Book. It is a formula for such cost allocations developed by the Government agencies, I believe.

Mr. WATTS. I am a little bit confused and am trying to get straightened out.

As I understood the situation, two of those dams had already been authorized for flood control?

Mr. ELLSWORTH. That is right.

Mr. WATTS. If you do not enact H. R. 4541, the Federal Government has no authority to participate in a multiple-purpose development. Is that correct?

Mr. ELLSWORTH. That is right. Then the projects stand in the rather impossible position of having been authorized for flood control, but the Government would be foolish to build them for flood control only since they do store substantial amounts of water which could generate power.

Mr. WATTS. Then as long as you did not enact 4541 you would only have an authorization on the part of the Government to build for flood control?

Mr. ELLSWORTH. That is right.

Mr. WATTS. Therefore, could they enter into the arrangement provided for by 7815?

Mr. ELLSWORTH. Yes, they could. Because 7815 also carries the authorization for power and of the dam itself. It to some extent duplicates authorization language already in existence. But it solidifies it with that bill.

Mr. WATTS. But by the enactment of H. R. 4541 you merely authorize the three projects for multiple-purpose development?

Mr. ELLSWORTH. That is correct.

Mr. WATTS. And then it can go in any direction it wants to? Either the Government can build them or it can be a joint enterprise between private industry and the Government?

Mr. ELLSWORTH. It then places them on exactly the same basis as the other dams, like Detroit, Cottage Grove, and Lookout Point. All of them have been built or are about to be completed, at any rate, under multiple-purpose authorizations, and do have power in them.

When this 4541 is enacted, these two then become exactly the same as the other multiple-purpose dams, and are then eligible for appropriation and construction.

Mr. WATTS. Does your second bill deal with all three projects?

Mr. ELLSWORTH. No, just the one. Because it has only the Eugene Water and Electric Board, which is the utility which furnishes the electric energy for the Eugene area, and its source of energy is largely hydro developed on the same river. The Eugene utility, if it fails to make this arrangement with the Government, will have to build a dam of its own some place on the stream to provide that amount of power.

They felt they could as well put their money in a harness with the Government as to see the Government build the dam at one point and they build another dam somewhere else.

Mr. WATTS. What I wanted to clear up in my mind is, if you can proceed with your other bill and get all of the relief you wanted, I wanted to find out what the benefit was of 4541, unless you wanted to include the two dams in it.

Mr. ELLSWORTH. That is right.

Mr. WATTS. That is the reason why you had the two bills instead of one?

Mr. ELLSWORTH. That is right. Because 7815 refers only to the McKenzie River and Cougar Dam. The flood situation on the Santiam is equally bad with the situation on the McKenzie, but 7815 does not apply to any other dam and river than the one. There is no certainty as yet that a partnership plan will be developed for the Santiam Dam and the Green Peter Dam. So, no harm is done by having the authorization in here for the Cougar Dam, which is the one referred to in 7815. Leave it in there, and authorize multiple purpose also at Green Peter, which includes White Bridge, and then all three are in order, no matter what happens to the partnership plans or arrangements.

Mr. MACK. This power will be available to the Northwest power pool, and to that extent will benefit the entire Northwest region?

Mr. ELLSWORTH. That is right. There is a power pool there, and, regardless of who puts the money into building the facilities, that power will be a part of the general pool, which includes Bonneville.

Mr. MACK. Are there any questions to my left?

(No response.)

Mr. MACK. Thank you, Mr. Ellsworth. You may introduce your other witnesses.

Mr. ELLSWORTH. Thank you, Mr. Chairman and members of the committee. I would like now to present our colleague, Mr. Sam Coon.

STATEMENT OF HON. SAM COON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

Mr. MACK. We will be very happy to hear from you, Mr. Coon.

Mr. COON. Thank you, Mr. Chairman. Mr. Chairman and members of the committee, I am here today in support of this legislation, H. R. 4541. I think it is a good bill and will aid in the development of that area.

Mr. Chairman, I ask unanimous consent to submit a statement at this point in the record.

Mr. MACK. Are either of these dams in your district?

Mr. COON. No, sir; they are not.

Mr. MACK. But indirectly, the people in your district will benefit from these dams by their increasing the power available to the Northwest power pool?

Mr. COON. That is right. They will.

Mr. MACK. Are there any questions?

(No response.)

Mr. MACK. You have permission of the Chair to insert your statement in the record.

(The prepared statement of Mr. Coon is as follows:)

STATEMENT OF CONGRESSMAN SAM COON ON BEHALF OF PARTNERSHIP DEVELOPMENT

Mr. Chairman, I wish to urge prompt and favorable action on H. R. 4541, to modify the general plan for development of the Columbia River Basin to provide for hydroelectric power development at the Cougar, Green Peter, and White Bridge sites. This authorization is a necessary preliminary to multipurpose construction at these sites.

These three projects are important to western Oregon in providing power and flood control. But the Cougar project has an added importance to eastern Oregon and the Nation as a whole as a pioneer project under the administration's new partnership policy of river development. As a demonstration of the feasibility of this policy, and a chance to gain experience in its application, I believe the project should be given high priority for action.

Congressman Harris Ellsworth and Senator Guy Cordon deserve the approval and respect of all of us for the leadership they have shown in proposing the Cougar partnership development in other legislation. Their proposal has been widely praised in the press and by President Eisenhower himself.

We in the Northwest have been pioneers in the past. I do not believe we are afraid to continue in this tradition. The bill we are considering today is a necessary preliminary to this step in pioneering a new way of bringing full and coordinated development to our rivers, a way we believe will bring this development quicker and with less cost to the taxpayers.

In the past year we have talked about the benefits of partnership development. Now we must demonstrate these benefits. The administration must exert bold leadership, and the Congress must give prompt and strong support to the forwarding of partnership development. We must not be satisfied until we have put into action a partnership program in which all reasonable people, regardless of party, can join with us.

I urge immediate action on H. R. 4541.

Mr. MACK. Mr. Ellsworth.

Mr. ELLSWORTH. Mr. Chairman and members of the committee, before introducing the gentlemen from Oregon, I want to add one thing to my previous statement. Colonel Whipple spoke of the timber stand in the area we are talking about, and the industrial development there on account of the timber. I think it is pertinent to the case to realize that some 62 percent of that timber is owned by the Federal Government itself. So the improvement of the area so far as the supply of

power is concerned, is a direct benefit to the Federal Government's own ownership.

I would like to present first Mr. Douglas Bradley, who is a farmer and who has lived most of his life along the Santiam. I would like Mr. Bradley to give the committee some firsthand facts of his own knowledge regarding the flood damage suffered on the Santiam and the need for this dam in that area.

Mr. ANGELL. Before the witness begins his testimony, may I ask the Congressman one question?

Mr. MACK. Mr. Angell.

Mr. ANGELL. For the purpose of the record, it is true, is it not, that the Willamette Valley is one of the most outstanding areas from the standpoint of agricultural development in the United States, as well as for timber which has been stressed here in the timbered area of Oregon?

Mr. ELLSWORTH. It is one of the great food-producing valleys of the whole Nation. That is true.

Mr. ANGELL. And these dams are in the immediate vicinity of the Williamette Valley?

Mr. ELLSWORTH. Yes, sir. That is right. And the flood waters we are trying to control are every year washing away hundreds and hundreds of acres of the very finest soil in the whole valley.

Mr. ANGELL. Thank you.

Mr. MACK. The committee wil be glad to hear from you, Mr. Bradley.

STATEMENT OF DOUGLAS BRADLEY, CHAIRMAN, SOUTH SANTIAM FLOOD CONTROL DISTRICT

Mr. BRADLEY. Mr. Chairman, my name is Doug Bradley, and I am chairman of the South Santiam Flood Control District. I am also talking for the Lebanon Flood Control District, which are the two main flood control districts up and down the South Santiam River. We have approximately 150 to 160 members in our particular group. I can say I am speaking for every one of them for the simple reason that almost every one of them has donated to and helped us in this meeting. We did not put up the money. The people along the river donated the money for us to come.

The reason why they sent me here was to get approval of H. R. 4541 as quickly as we can.

I have a few topics here I would like to discuss with you for a minute or two to show you the urgent need for this bill, and to show that we do need flood control, and need it now.

My place is on the lower end of the South Santiam, just above where the two rivers come together, that is, where the North and South Santiam come together. They come down in a delta area not quite V-shaped. But in that big V there are approximately 800 acres.

Most of that land has been cleared up. I went down there in about 1938 and bought 70 acres right along the South River for about a half a mile up and down the South River. In that big V between the two rivers, as I said, we have approximately 800 acres. The biggest share of it has been cleared up since 1930. It produces some of the best gardens and peppermint with the highest yields of any place in the valley.

Since we had the Detroit Dam built, I have to cross the North River to go to my place on the South River and I find this occurring. During a flood the North River is held well inside its banks. The engineers did a good job on that dam. But here is the South River about a mile south of it, which comes down here, and there is no control over it. In that big V, with the approximately 800 acres we are getting a heavy crossflow. It has taken out a power pole and has taken a very heavy toll in soil erosion. There are great holes washed away in the field and sand and soil is piled up so high on your peppermint that you have to take power scoops and clean it off and plant your mint all over again—which is a very expensive proposition.

That is what is happening on the lower end of our delta land. At one particular place the river is about to cut across from the South to the North River, right at the upper end of this particular delta area. There are a lot of nice homes in there. The fact of the matter is last year there was a new home that cost a little over $30,000 that was just built there.

If that river cuts across there to the North River, then probably in addition to the natural fall, it has an addition of 6 feet of fall through the North River being held down, with no control on the South River. With that additional 4 to 6 feet of fall, the river may cut across there and if it does the whole 800 acres is lost.

Now we can go up the river a little bit further. A little bit up the river and across the river one of my neighbors had 26 acres a few years ago. He is an old man and not able to go out to work. He has less than 5 acres left, which makes it pretty rough on a man who worked his whole life in order to get a home and then has to see it washed down the river.

In another place the engineers built a revetment, but according to the deeds which we checked a while back, they had 180 acres and now there is less than 80 acres left on that man's farm.

A little further along, in the Crabtree area, the river is trying to cut out of its bank. It has made a big circle and is feeding into a big draw. Any time the river gets very high it runs floodwaters down through the town of Crabtree. Last year they had a foot and a half of water going through their main streets, which is something that very seldom happens, and never happened before.

Talking about irrigation and the need for power, I remember when the first pump was started in that area, which was one of the first irrigation pumps in the United States. It was in about 1936. They used a sprinkler made out of boiler tubes with holes cut out in them. Today there are over 500 irrigation pumps in our area.

What I am getting at is that those 500 pumps are pumping more water than what we get coming down the South Santiam River. When you get in a dry spell and get these 500 pumps running, the first thing you know is that this begins to go dry and it makes you wonder what you will do.

In addition to mint in that particular area we produce a lot of garden foods like beans and corn, and most anything of that sort you might want. That all takes water and it all takes that type of soil. You cannot raise that kind of food on all kinds of soil.

Those are some of the reasons why we need this. It is those damages to the farmland, the crossing of the water across the land we

have there and cutting into the cities and flooding them, and many other things. It is not just what I have mentioned here, but I could stay here all afternoon and keep mentioning things. If this river keeps on getting worse it will do more damage.

It used to cut out a little and then the current would go back, and that was the end of it. But there is so much timber being cut out above that we get a much faster flow. Consequently we figure the flows are too great for us to do anything about stopping them.

So, once again I say that I speak for all of the people, or practically every one of them up and down the river, in urging you to see that we get started on H. R. 4541. I believe that is all I have to say unless some of you have some questions.

Mr. MACK. Thank you very much for your testimony, Mr. Bradley. Mr. Ellsworth, I have one question. You mentioned that the Eugene Water and Electric Board, a municipal corporation, desires to secure a permit for the Cougar development. What was the company you mentioned as desiring to build the Green Peter and White Bridge?

Mr. ELLSWORTH. I believe that is the Pacific Power & Light Co.

Mr. MACK. Is that a private or a public utility?

Mr. ELLSWORTH. They are a privately owned public utility. The Eugene Water and Electric Board is municipally owned by the city of Eugene.

I would like to add one comment to Mr. Bradley's testimony. One of the great values of the flood-control dam on the Santiam is to keep a good water level during the summer months so that the river does not go almost dry and become warm and stagnant, and then become a menace to health and, of course, eliminates fishlife. That is the reason why all of the fish and game organizations in the whole State have endorsed the construction of both of these dams—both Cougar and Green Peter.

The idea is to keep a reasonable water level in the river winter and summer.

Now I would like to present Mr. Max Landon, who is in the insurance business in the town of Sweet Home on the South Santiam River. Mr. Landon asked me to say to the committee he is a little hard of hearing, so when you address questions to him you might raise your voice a little bit.

Mr. MACK. We are pleased to hear from you at this time, Mr. Landon.

STATEMENT OF MAX LANDON, REPRESENTING VARIOUS ORGANIZATIONS AND THE SOUTH SANTIAM DEVELOPMENT COMMITTEE

Mr. LANDON. Mr. Chairman and members of the committee, I represent about 27 different organizations down in the area we are discussing, through the South Santiam Development Committee.

If the secretary would give you gentlemen one of those briefs I will just touch on a few points which you may look at at your convenience later on.

I might apologize for those briefs. We only brought originals back which are typewritten by our own committee, and Congressman Ellsworth suggested the committee might like to have them, so we had some photostat copies made after we arrived in Washington.

The first 25 pages of this brief, gentlemen, just briefly outlines our need for flood control on our portion of the project, which you can look over at your leisure if you so desire. I would like to call your attention to the first page of writing after the last picture—and I do not believe these pages are numbered in the brief—which is entitled "Area Approval of Green Peter Dam." On that page we have listed the 27 organizations which I represent here. We could get many more if we had to, but it takes in the following: Linn County court, Marion County court, Albany Chamber of Commerce and various other chambers of commerce, the local CIO and A. F. of L. as well as the game and fish associations.

It also includes various clubs, such as the Kiwanis and the Rotary clubs.

I call your attention to the fact that this is of tremendous importance to all of the people in the community. One concrete example of that which I would like to give you is nobody in that district felt they could individually bear the expense of our being here to present our case. Here is a list of 33 people in a little community of Crabtree who put in $1 to $5 apiece and raised $100 in that manner. My local chamber of commerce gave $300. The Kiwanis and Rotary clubs gave $50 apiece. That is the way the money was raised to send Mr. Bradley and myself back here.

I merely state that as an indication that the community as a whole is seeking this legislation. The prime factor of the Green Peter Dam is flood control, of which you gentlemen are aware, but there are several other factors which enter into this. One of them is stabilizing the river flow, which is very important to us from the economic standpoint industrialwise. We have some trouble there in the summer months with the river getting very low. As you know, industry is reluctant to come in where there is any factor of stream pollution entering into it.

We have enormous quantities of bark and wood waste lying in the woods that we can utilize for pulpwood and paper if we stabilize this so that there will be no problem of stream pollution.

One of the other factors in this is irrigation. We have to stabilize the flow of the water so that it can be taken out for irrigation. We have to have an increased waterflow in order to maintain our irrigation system there, because of the low water periods. I would like to read, with your permission, a paragraph from Santiam Fish & Game Association's document.

> One of the legal reasons for the group favoring this project was the fact that such a dam would be a great asset to fish life, because it felt a more uniform flow of water would be made available during the summer months.

When this little committee was organized in this community and 7 members were appointed, with 1 man being from Sweet Home, which is I, the mayor of Albany, a gentleman from the town of Lebanon and 4 others from the area, we wanted to utilize the fact that Eugene had gone in through their power association. So we contacted our local supplier of electricity, which is the Mountain States Power Co. We followed it up with them, and after considerable consultation with them, and consulting their engineers we arrived at the following.

I am sorry that the gentleman who asked the question about a commitment is not here because I would like to read a letter of the local utility company which I will leave with you.

PACIFIC POWER & LIGHT CO.,
Portland, Oreg., March 12, 1954.

SOUTH SANTIAM DEVELOPMENT COMMITTEE,
Lebanon, Oreg.

GENTLEMEN: Pacific Power & Light Co. and Mountain States Power Co. have given serious consideration to the request of your committee that the companies undertake to aid in construction of the Green Peter project on the Middle Fork of the Santiam River, authorized by act of Congress approved June 28, 1938, for improvement of the Willamette River Basin, Oreg., for flood control and minimum power facilities.

Review of the available data indicates that this may be a marginal project from the standpoint of electric-energy production costs. However, the output of the project would help meet power needs in the Pacific Northwest and in view of the representations made by you as to the importance of this proposed project in controlling destructive floods in the Santiam Basin, we believe we should join with you in making every effort to support the project.

The installation of power facilities by the Pacific States companies (or by Pacific alone if the pending merger of Mountain States into Pacific is consummated) would substantially reduce the costs that would be incurred by the Government in the construction of a dam for flood control as presently authorized. Therefore, in the interest of the area, we are willing to agree with your committee to participate with the Federal Government in the construction of the Green Peter project to the extent of installing power facilities and bearing such proportionate share of the costs of construction, operation, and maintenance of the dam and reservoir as may appropriately be allocated to power. Such participation would be in accordance with the terms of the Federal Power Act and necessary enabling legislation by the Congress.

This letter is written to confirm the intention of the two companies with respect to their participation as outlined above.

PACIFIC POWER & LIGHT CO.,
By PAUL B. MCKEE, *President.*
MOUNTAIN STATES POWER CO.,
By A. W. TRIMBLE, *President.*

The other letter I have is purely engineering, and I would like to read it. It answers the question that the gentleman asked a few moments ago.

PACIFIC POWER & LIGHT CO.,
Portland, Oreg., March 12, 1954.

SOUTH SANTIAM DEVELOPMENT COMMITTEE,
Lebanon, Oreg.

GENTLEMEN: At a recent meeting, a member of the committee asked if we would supply a brief statement of the power aspects of the Green Peter project on the Middle Santiam River near Lebanon, Oreg.

As proposed by the Army engineers, the Green Peter project would have installed 2 units totaling 81,000 kilowatts with a reregulating dam downstream at White Bridge with an installation of 15,000 kilowatts, making the total project installation some 96,000 kilowatts. The project would produce 280 million kilowatt-hours on the average annually, of which about 75 percent would be available between November and April.

This power would be extremely valuable to the Northwest in that it would be located near the load centers and available during that part of the year when there is a general deficiency on the Columbia River. In the remainder of the year, the Columbia River could supply the load with existing energy now going unutilized with the result that the total additional electric power carrying ability of the Northwest interconnected pool could be increased by nearly 100,000 kilowatts.

The project is located only 11 miles from the end of the 69-kilovolt transmission line of Mountain States Power Co. and about 23 miles from the 115-kilovolt line of Bonneville Power Administration. Thus, with strengthening or rebuilding the 69-kilovolt line, the project could be readily connected with minimum expense and difficulty into the entire Northwest regional pool.

The construction and operation of the project for flood control is, of course, the primary purpose. Generation of electric power can readily be fitted into that requirement with mutual advantage to all project features.

Should the committee desire additional information, please feel free to request it.

Very truly yours,

(Signed) E. Robt. de Luccia,
E. ROBERT DE LUCCIA,
Vice President and Chief Engineer.

Gentlemen, I could talk about this thing for hours, because I am so enthused about it. We need it. I want to thank you gentlemen for listening to this and, in particular, to thank you, Congressman Mack, for giving us this time. We ask and hope you will give favorable consideration to the House Resolution.

Mr. MACK. Thank you, Mr. Landon.

Mr. LANDON. If there are any questions, I will be glad to answer them.

Mr. MACK. Are there any questions?

(No response.)

Mr. MACK. Thank you. Mr. Ellsworth, have you anything else?

Mr. ELLSWORTH. I believe that about sums it up unless the committee has some questions. I would like to read a telegram into the record which reached me this morning. It is from C. V. Patterson, president of the Sweet Home Chamber of Commerce. He says:

We urge your utmost support of bill authorizing Green Peter and White Bridge Dams for flood control, Santiam River, and approval Pacific Power & Light proposal to build power features of these dams. Bill passing this session a must for economy of this area.

Mr. ANGELL. May I say I received a telegram similar to that, Mr. Chairman, also from Mr. Patterson.

Mr. MACK. Without objection, the telegram may be received and inserted in the record at this point.

(The telegram is as follows:)

SWEET HOME, OREG., *March 19, 1954.*

HON. HARRIS ELLSWORTH,
House of Representatives, Washington, D. C.:

We urge your utmost support of bill authorizing Green Peter and White Bridge Dams for flood control, Santiam River, and approval Pacific Power & Light proposal to build power features of these dams. Bill passing this session a must for economy of this area.

C. V. PATTERSON,
President, Sweet Home Chamber of Commerce.

Mr. ELLSWORTH. Again I want to express my thanks to you gentlemen of the committee for meeting here this afternoon and hearing our witnesses from home. It is a great help to them to know that they and their neighbors through their efforts have been able to appear before your great committee. We are most grateful to you, and I speak in their behalf.

Mr. MACK. Thank you, Mr. Ellsworth.

Mr. ELLSWORTH. Mr. Chairman, if I may say one more word. I hope that the testimony you have heard today will warrant the committee in including this little authorization bill in the forthcoming omnibus bill regardless of what action may be taken later on the partnership projects, and proposals.

Mr. MACK. I think we will probably consider it next week in executive session.

Mr. ELLSWORTH. The two proposals, the partnership bill and this bill, are not competitive in any way. They do not conflict in any way. This bill is necessary to put the projects in proper form for an orderly program of planning and construction.

Thank you.

Mr. MACK. Thank you very much, Mr. Ellsworth. If there are no more witnesses, this hearing is completed.

(Whereupon, at 3:35 p. m., the hearing was concluded.)

COUGAR DAM HYDROELECTRIC PROJECT

WEDNESDAY, APRIL 28, 1954

HOUSE OF REPRESENTATIVES,
COMMITTEE ON PUBLIC WORKS,
SUBCOMMITTEE ON FLOOD CONTROL,
Washington, D. C.

The subcommittee met, pursuant to call, at 10 a. m., in room 1302, New House Office Building, Hon. Russell V. Mack, chairman of the subcommittee, presiding.

Mr. MACK. The Subcommitttee on Flood Control of the House Public Works Committee will now be in session for the consideration of H. R. 7815, by Mr. Ellsworth, of Oregon.

This is a bill to provide for the construction, operation, and maintenance of the Cougar Dam and Reservoir on the South Fork McKenzie River, Oreg., with participation for power by the city of Eugene, Oreg.

At this point the Chair will direct the bill, H. R. 7815, and letters from Bureau of the Budget, Department of the Army, and Federal Power Commission, be inserted in the record.

(The items are as follows:)

[H. R. 7815, 83d Cong., 2d sess.]

A BILL To provide for the construction, operation, and maintenance of the Cougar Dam and Reservoir on the South Fork McKenzie River, Oregon, with participation for power by the city of Eugene, Oregon

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the comprehensive plan of improvement for the Willamette River Basin, Oregon, as authorized by the Act of Congress approved June 28, 1938 (52 Stat. 1215), as amended and supplemented by subsequent Acts of Congress, is hereby modified to provide for the construction, operation, and maintenance of the Cougar Dam and Reservoir project under the direction of the Secretary of the Army and supervision of the Chief of Engineers substantially in accordance with the plans contained in House Document Numbered 531, Eighty-first Congress, second session, and is hereby further modified to include power facilities at Cougar Dam which may be provided by the city of Eugene, Oregon, in accordance with the terms of the Federal Power Act in accordance with this Act.

SEC. 2. The Cougar Dam and Reservoir shall be constructed, operated, and maintained by the Department of the Army as a unit of the comprehensive plan for the Willamette River Basin for the control and utilization of the water resources for flood control, navigation, power, conservation, and other beneficial purposes, and the appropriation of funds therefor is authorized.

SEC. 3. Power-generating facilities and appurtenances therefor may be constructed by the city of Eugene, or such facilities and appurtenances may be constructed by the Corps on Engineers as agent for the city of Eugene with funds advanced therefor by the city. Such construction shall be in accordance with provisions of a license by the Federal Power Commission, and with the provisions of this Act. The city of Eugene shall own all such facilities and appurtenances and shall operate and maintain such facilities and appurtenances at its own cost and expense.

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SEC. 4. The dam and reservoir shall remain the property of the Federal Government. The city of Eugene shall pay to the Department of the Army such proportionate share of the cost of construction, operation, and maintenance of the dam and reservoir as may be appropriately allocated to power development, such allocation to be made by the Chief of Engineers, under direction of the Secretary of the Army, in collaboration with the Federal Power Commission in accordance with the "separable-cost-remaining benefits" method of cost allocation as recommended by the Federal Inter-Agency River Basin Subcommittee on Benefits and Costs in its report dated May 1950, or by such other method as may be mutually agreed upon by the city of Eugene and the Secretary of the Army and approved by the Federal Power Commission.

SEC. 5. The Chief of Engineers, under the direction of the Secretary of the Army, shall enter into an agreement with the city of Eugene, acting by and through its Eugene Water and Electric Board, for the operation of the dam and reservoir insofar as such operation affects the development of power, for contribution of funds by the city in accordance with this Act, and for other matters necessary for the joint construction, operation, and maintenance of the Cougar Dam and Reservoir project in accordance with this Act. Such agreement shall be for a period consistent with the period of the license issued by the Federal Power Commission and may be amended from time to time for mutual agreement.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D. C., April 21, 1954.

Hon. GEORGE A. DONDERO,
Chairman, Committee on Public Works,
House of Representatives, Washington, D. C.

MY DEAR MR. CHAIRMAN: This is in response to your letter of March 12, 1954, requesting the views of the Bureau of the Budget on H. R. 7815, a bill to provide for the construction, operation, and maintenance of the Cougar Dam and Reservoir on the South Fork McKenzie River, Oreg., with participation for power by the city of Eugene, Oreg.

Enactment of this bill would provide a basis for cooperative Federal and local participation in the development of water resources, and would thus be a step toward implementation of the policies of this administration which call for more local participation in this field. The Bureau of the Budget favors enactment of H. R. 7815.

Section 4 of the bill would provide that the allocation of cost of the project to power be made in accordance with the "separable-cost-remaining benefits" method of cost allocation or by such other method as may be mutually agreed upon by the city of Eugene and the Secretary of the Army and approved by the Federal Power Commission. Should this bill be enacted it would be the first time a particular method of allocating costs has been written into legislation authorizing a project. From the estimates of allocations understood to be proposed for this project it appears that an equitable distribution is contemplated. We are now reviewing the various methods used in making cost allocations on water resources projects for the purpose of attempting to device a more uniform approach on the part of the various Federal agencies to this problem. Therefore, while we have no objection to section 4 of this particular bill, we would not wish this to be construed as an endorsement of the "separable-cost-remaining benefits" method for uniform application to future water resources projects.

Sincerely yours,

ROWLAND HUGHES, *Director.*

DEPARTMENT OF THE ARMY,
April 26, 1954.

Hon. GEORGE A. DONDERO,
Chairman, Committee on Public Works,
House of Representatives.

DEAR MR. CHAIRMAN: Reference is made to your request for the views of the Department of the Army concerning H. R. 7815, 83d Congress, a bill to provide for the construction, operation, and maintenance of the Cougar Dam and Reser-

voir on the South Fork, McKenzie River, Oreg., with participation for power by the city of Eugene, Oreg.

The Department of the Army has considered the above-mentioned bill. The purpose of the bill is to modify the comprehensive plan of improvement for the Willamette River Basin as authorized by the act of Congress approved June 28, 1938 (52 Stat. 1215), as amended and supplemented, to provide for the development of the Cougar Dam and Reservoir in accordance with plans contained in House Document No. 531, 83d Congress, and further to authorize the inclusion of power facilities which may be provided by the city of Eugene, Oreg. The dam and reservoir would be constructed, operated, and maintained by the Department of the Army as a unit of the comprehensive plan for the Willamette River Basin for flood control, navigation, power, conservation, and other beneficial uses. Construction of the power-generating facilities and appurtenances by the city of Eugene or by the Corps of Engineers as agent for and with funds provided by the city would be authorized, the construction to be in accordance with provisions of a license to be issued by the Federal Power Commission. The bill also provides for operation and maintenance of the power facilities and appurtenances by the city of Eugene at its own cost and expense, and for payment by the city of such share of the cost of constructing, operating, and maintaining the dam and reservoir as may be appropriately allocated to power development. Operation of the dam and reservoir insofar as such operation affects the development of power, the contribution of funds by the city, and other matters of joint concern would be implemented by agreement between the city of Eugene and the Chief of Engineers.

The site of the Cougar Dam is on the South Fork of McKenzie River, Oreg., about 44 miles north and east of Eugene, Oreg. The Cougar Dam and Reservoir is one unit of the comprehensive plan of improvement for the Willamette River Basin, Oreg., as authorized by the act of Congress approved June 28, 1938, as amended and supplemented. The present authorization for the Cougar project provides for the primary functions of flood control, navigation, and irrigation, as well as other beneficial uses, however it does not provide for the inclusion of power-generating facilities other than minimum facilities for possible future use.

The presently authorized project has a high degree of economic feasibility, and its immediate construction is well justified. The inclusion of power-generating facilities in the Cougar project is also economically justified and is a desirable addition from the standpoint of achieving maximum control and utilization of the water resources of the river basin. In addition to the increment of cost required to provide generating facilities, power would also carry a share of the joint costs of the overall project, and its inclusion would reduce the cost necessary to provide for the other uses.

The provisions of H. R. 7815 provide a satisfactory basis for cooperative development of the project, and this Department favors the enactment of the bill into law.

The Bureau of the Budget advised that there would be no objection to the submission of an identical report on a companion bill, S. 2920.

Sincerely yours,

ROBERT T. STEVENS,
Secretary of the Army.

FEDERAL POWER COMMISSION,
Washington, April 23, 1954.

HON. GEORGE A. DONDERO,
Chairman, Committee on Public Works,
United States House of Representatives, Washington, D. C.

DEAR MR. CHAIRMAN: In response to your request there are enclosed three copies of the report of the Federal Power Commission on the bill (H. R. 7815) to provide for the construction, operation, and maintenance of the Cougar Dam and Reservoir on the South Fork McKenzie River, Oreg., with participation for power by the city of Eugene, Oreg.

We have just been advised that there is no objection by the Bureau of the Budget to the presentation of this report to the Committee on Public Works.

Sinceerly yours,

JEROME K. KUYKENDALL, *Chairman.*

FEDERAL POWER COMMISSION REPORT ON H. R. 7815, 83D CONGRESS, BY JEROME K. KUYKENDALL, CHAIRMAN

A bill to provide for the construction, operation, and maintenance of the Cougar Dam and Reservoir on the South Fork McKenzie River, Oreg., with participation for power by the city of Eugene, Oreg.

This bill would modify the comprehensive plan of improvement for the Willamette River Basin, Oreg., as authorized by the 1938 Flood Control Act (Public Law 761, 75th Cong., 52 Stat. 1215), as amended and supplemented by subsequent acts of Congress, to provide for the construction, operation, and maintenance of the Cougar Dam and Reservoir multiple-purpose project on the South Fork McKenzie River by the Department of the Army as a unit of such plan in accordance with House Document 531, 81st Congress. It would further modify the plan to include power facilities at the Cougar Dam which may be provided by the city of Eugene, Oreg., in accordance with the Federal Power Act and this bill.

The bill authorizes the appropriation of funds for the construction, operation, and maintenance of the Cougar Dam and Reservoir by the Department of the Army for flood control, navigation, power, and other purposes as a unit of the comprehensive plan for the Willamette River Basin, and provides that the dam and reservoir shall remain the property of the Federal Government. It is further provided that the Army shall enter into a contract with the city of Eugene for the operation of the dam and reservoir insofar as power development would be affected, and for the payment by the city to the Army of the portion of the cost of construction, operation, and maintenance of the dam and reservoir allocated to power by the Army in collaboration with the Federal Power Commission.

H. R. 7851 contemplates that the power-generating and appurtenant facilities be constructed by the city or by the Army with city funds and owned by the city. Such construction, operation, and maintenance would be undertaken in accordance with a Commission license and that provisions of the bill.

Section 4 provides that the costs allocated to power shall be in accordance with the separable-cost-remaining-benefits method (the so-called green-book method), or by such other method mutually agreeable to the city of Eugene and the Secretary of the Army and approved by the Federal Power Commission. Thus, if this bill becomes law, the green-book method of cost allocation would be given legislative sanction. This method, which was recommended by the Federal Interagency River Basin Subcommittee on Benefits and Costs in its May 1950 report, has been supported by the Commission in statements to the Bureau of the Budget and to Congress and is considered to be a desirable method of cost allocation. It was used recently by the Commission in its order determining the interim allocation of costs of the McNary project (docket No. E–6383), issued December 4, 1953.

The Commission recommends enactment of H. R. 7815 as an effective and desirable means of accomplishing joint Federal and non-Federal water-resource development consistently with the basic purpose of the Federal Power Act to provide for non-Federal development of such water resources wherever broad public benefits can be obtained in harmony with comprehensive water-development plans.

Mr. MACK. The first witness in explaining this project will be Brig. Gen. E. C. Itschner, Corps of Army Engineers.

STATEMENT OF BRIG. GEN. E. C. ITSCHNER, CORPS OF ENGINEERS, DEPARTMENT OF THE ARMY

General ITSCHNER. Mr. Chairman and gentlemen, Couger Dam and Reservoir is an authorized project in central Oregon, 44 miles northeast of Eugene, Oreg. It is located on the South Fork of the McKenzie River, 4.4 miles above its junction with the main stem of the McKenzie River, and 60.9 miles above the confluence of the McKenzie and Willamette Rivers. The principal functions will be to provide flood control and power generation, with incidental navigation, irrigation, domestic water supply, pollution abatement, and public use benefits.

The project as recommended in House Document 531, 83d Congress, consists of a dam and reservoir with complete power-generating facilities. In acting on the recommendations in House Document 531, the Congress considered Cougar Dam to be already authorized for the same purpose for which Quartz Creek Dam was authorized and did not take any specific action on the recommendation for power-generating facilities at Cougar Dam since none were authorized for Quartz Creek Dam. As a result complete power-generating facilities are not considered to be authorized, although minimum provisions for future power-generating facilities will be included.

The benefit-cost ratio for the proposed project with complete power-generating facilities would be 1.80 to 1 and for the incremental power facilities 1.39 to 1.

We have under consideration today H. R. 7815, 83d Congress. The purpose of this bill is to modify the comprehensive plan for improvement of the Willamette River Basin as authorized by the act of Congress approved June 28, 1938, as amended and supplemented, to provide for the development of Cougar Dam and Reservoir in accordance with the plans contained in House Document 531, 83d Congress. Its further purpose is to authorize inclusion of power facilities which may be provided by the city of Eugene, Oreg.

The dam and reservoir would be constructed, operated, and maintained by the Department of the Army as a unit of the comprehensive plan for the Willamette River Basin for flood control, navigation, power, conservation, and other beneficial uses. Construction of the power-generating facilities and appurtenances by the city of Eugene or by the Corps of Engineers as agent for and with funds provided by the city would be authorized, the construction to be in accordance with provisions of a license to be issued by the Federal Power Commission.

The bill also provides for operation and maintenance of the power facilities and appurtenances by the city of Eugene at its own cost and expense, and for payment by the city of such share of the cost of constructing, operating, and maintaining the dam and reservoir as may be appropriately allocated to power development.

In other words, the city pays for the entire cost of the power facilities and a proper proportion of the cost for joint facilities.

Operation of the dam and reservoir insofar as such operation affects the development of power, the contribution of funds by the city, and other matters of joint concern, would be implemented by agreement between the city of Eugene and the Chief of Engineers.

The presently authorized project has a high degree of economic feasibility, and its immediate construction is well justified. The inclusion of power facilities in the Cougar project is also economically justified and is a desirable addition from the standpoint of achieving maximum control and utilization of the water resources of the river basin.

In addition to the increment of cost required to provide generating facilities, power would also carry a share of the joint costs of the overall project and its inclusion would reduce the cost necessary to provide for the other uses.

The provisions of H. R. 7815 provide a satisfactory basis for cooperative development of the project, and this Department favors the enactment of the bill into law.

That is all the prepared statement I have, sir. Perhaps Colonel Whipple or I would be prepared to answer any questions you may have. Colonel Whipple has given a great deal of attention and effort to this project and is very familiar with it.

Mr. MACK. General, what is the need for flood control in this particular area?

General ITSCHNER. May I ask Colonel Whipple to answer this question?

Mr. MACK. Yes.

STATEMENT OF COL. WILLIAM WHIPPLE, CORPS OF ENGINEERS, DEPARTMENT OF THE ARMY—Resumed

Colonel WHIPPLE. If I might refer to this map, it shows the McKenzie River Valley, which is the largest uncontrolled tributary of the Willamette. The Willamette Valley has been one of the most difficult areas in which to control floods in the Pacific Northwest, and a comprehensive plan of improvement in the interests of flood control as well as other purposes has been authorized for a number of years.

From the projects that have been constructed in that area we have a considerable degree of control of the major tributaries, with the exception of the McKenzie, which contributes large flows to the vicinity of Eugene. Below Eugene the Willamette Valley spreads out and is subject to floods which occur periodically. It spreads out from 5 to 15 miles in width across some extremely fertile farmlands.

This project has been authorized for flood control, and we have previously, as you recall, had hearings before this committee, with a view to changing the authorization to include the provision of hydroelectric power. The flood control provided is the more necessary because with the completion of the Lookout Point Dam, which very largely controls floods on the Willamette itself above Eugene, the uncontrolled McKenzie at times, when both streams would normally be in flood, tends to flow across the low-lying land which is near the intersection of the two streams and is actually causing certain localized problems of erosion down there, due to the fact that one of the streams is controlled in times of flood and the other has the naturally high levels.

Mr. MACK. Colonel, where is the damage done by high water in the McKenzie River? In the valley of the McKenzie or the valley of the Willamette?

Colonel WHIPPLE. There is damage done in the valley of the McKenzie itself, in the lower miles of the valley. But the greater part of the damage is in the Willamette Valley itself down below the mouth of the McKenzie.

Mr. MACK. And the flood-control measures are to be what, in order to make a correction to the situation, Colonel?

Colonel WHIPPLE. I am sorry, sir. I did not get the question.

Mr. MACK. What type of flood control protective works are to be installed by the Army?

Colonel WHIPPLE. The only type of flood control that is feasible is the system of multiple-purpose reservoirs on not only the McKenzie, but the other principal tributaries of the Willamette itself.

If you look at the map, the McKenzie River heads up in the mountains, the greatest flood-producing area being the high mountain areas

of the Cascades that generally bound the basin. You can see the location of the Cougar plant on the south fork of the McKenzie River in the high flood producing areas. This is contemplated to be supplemented at a later date by other reservoirs which may be built on the Blue River and Gate Creek, somewhat smaller tributaries on the opposite side of the McKenzie River.

Mr. MACK. What is the theory of this? Is it that the waters will be released ahead of floods and left open to fill the basin in time of flood?

Colonel WHIPPLE. Yes, sir. It is a coordinated operation in the interests of flood control and power. The flood-producing season of the Willamette is during the winter. During that time we intend to hold storage of 155,000 acre-feet for flood-control storage and 47,000 for power above the minimum power pool.

Mr. MACK. The point I am trying to get at, Colonel, is this: If a flood is impending, will the Army engineers, if Eugene builds this dam, have the authority to control the release of the water behind that dam?

Colonel WHIPPLE. Yes, sir. That is correct. However, in order that that can be understood and the city of Eugene can make their plans for the development of power and know that the operation of flood control will not interfere with the operation for power, we have had operation studies, and the system of operation of the project is basically worked out now and has been the subject of discussions with the city, and is well understood by them.

During this main flood period of December 1 to January 31, of the flood storage of 155,000 acre-feet, 125,000 would be held vacant for flood control at all times; and if filled by a flood it would be evacuated as quickly as possible by the outlets of the project. The other 30,000 acre-feet of secondary flood control would be allowed to be filled in the interests of power and used for power until the snow-melt situation and other hydrological features indicate the potentiality of a major flood, at which time it would have to be drawn down. The drawing down would be at the discretion of the district engineer in accordance with the terms of the agreement which would be worked out.

However, at other times of the year, particularly during the summer when the Willamette Basin is not subject to major floods, all of this storage would be allowed to be filled in the interests of water conservation and power, except for 14,000 feet, a relatively small amount, which would be held vacant even during the summer in the interests of flood control.

Mr. MACK. What are the latest estimates of the Army engineers as to the costs of this flood-control reservoir at Cougar for the flood-control features alone, and not counting the power?

Colonel WHIPPLE. If the dam were built for flood control and without provision for power at all, it would be about $27,300,000.

Mr. MACK. What is the estimated cost with the power features installed?

Colonel WHIPPLE. With the power features it is $37,400,000.

Mr. MACK. Under this legislation how much would be the expenditures or estimated expenditures of the Army engineers?

Colonel WHIPPLE. Sir, that depends on a cost allocation which, according to the bill, will be made after the completion of planning by

the Chief of Engineers, in collaboration with the Federal Power Commission.

The bill further provides that that allocation will be made in accordance with the separable-costs-remaining-benefits method outlined by the Subcommittee on Benefits and Costs of the Federal Inter-Agency Committee, or by other methods that may be subsequently found agreeable.

Mr. MACK. I understood General Itschner to say that the cost to the Federal Government would be less. In other words, that the city of Eugene would assume some of the cost of flood control in building their power project.

Colonel WHIPPLE. Yes, sir.

Mr. MACK. Would the cost to the Federal Government, if Eugene is granted permission to install these power facilities, be less than $27,500,000, which is the estimated cost of the flood-control feature?

Colonel WHIPPLE. That is correct. It will be reduced. We have made a tentative cost allocation according to our best judgment at this time based on the estimates of costs that are now available.

I would like to talk a little more about that because it is very important.

Mr. MACK. We would like to have that information, Colonel.

Colonel WHIPPLE. But to answer your direct question first, it will reduce the cost of the flood-control features approximately one-half a million dollars to carry out this agreement for the inclusion of the multiple-purpose power features and the allocation of approximately $10,500,000 to the city of Eugene for that purpose.

Mr. MACK. In other words, you are saying that the Federal Government by the passage of this bill would save about $500,000?

Colonel WHIPPLE. In the execution of the flood-control features. Yes, sir. That is right.

Mr. MACK. Mr. Trimble.

Mr. TRIMBLE. No questions.

Mr. MACK. Mr. Angell.

Mr. ANGELL. Colonel Whipple, this project is one of several included in the comprehensive plan for the flood control of the Willamette Valley Basin; is it not?

Colonel WHIPPLE. Yes, sir.

Mr. ANGELL. And it was authorized in connection with that overall program?

Colonel WHIPPLE. Yes, sir.

Mr. ANGELL. Does the authorization include the generation of hydroelectric power?

Colonel WHIPPLE. No, sir. House Document 531, which is the comprehensive plan, outlined this project with the inclusion of the power features. However, it was considered that the project was already authorized previous to that time for water conservation and flood control as a substitute for the Quartz Creek project.

The Congress being much rushed at that time, did not take any action on that recommendation for the inclusion of the power features. A bill has been introduced and testified to before this committee to authorize the power features, and we are testifying today on the assumption that the dam if built would be built with the power features included.

Mr. ANGELL. Does this bill cover the authorization of power features or must that be carried in the bill to which you refer?

Colonel WHIPPLE. It does authorize the power features.

General ITSCHNER. This bill does authorize it.

Mr. ANGELL. If this bill is passed the other bill will not be necessary?

Colonel WHIPPLE. That is correct, sir.

Mr. ANGELL. Colonel, who will own the generating facilities if this bill becomes a law?

Colonel WHIPPLE. Even if this bill becomes law, it is possible that the partnership agreement will fall through and the project will be built by the Corps of Engineers as a Federal project. However, if the partnership arrangement is successfully carried out by the city of Eugene Water and Electric Board, the ownership of the dam and reservoir, and the operation and maintenance of the dam and reservoir, will remain in the hands of the Federal Government.

The power features themselves, which would include the penstock and powerhouse, and any transmission lines, and any other works which are purely electrical facilities, would be legally owned and physically operated and controlled by the city of Eugene.

Mr. ANGELL. At the end of the amortization period they would not revert to the Federal Government, that is, the title to them would not revert to the Federal Government, Colonel?

Colonel WHIPPLE. No, sir. Under this bill it would become their property and there is no provision for its reversion to the Federal Government at any time.

Mr. ANGELL. Is this the first project involving such a program? That is, a partnership-ownership arrangement between the Federal Government and a municipality or other utility?

Colonel WHIPPLE. Sir, there have been a number of arrangements in the past, some of which have been physically carried out, and others of which have been and are currently under consideration by the Congress, which call for some division of the responsibilities between the Federal Government and private or other non-Federal agencies. This is the first proposal which carries out the features of this particular arrangement. The distinguishing features of this arrangement which make it new are in the first place a distinct differentiation between the power investment and the flood-control investment, whereby the Federal Government finds out exactly what the nonpower investment is by means of an allocation of costs and pays it, and the city pays the power investment.

The other feature in this is that ownership follows not precisely that same formula, but close to it. The ownership is also divided between the Federal Government and the city.

Thirdly, the operations and maintenance follow the same rule whereby each assumes a responsibility. The previous bills or proposals have not included one or more of those features.

I might add also that the construction responsibility is also divided between the Federal Government and the city, although that has been divided in certain other cases before this.

Mr. ANGELL. Colonel Whipple, if the generating facilities should be constructed and retained by the Federal Government, would their operation under existing power rates result in a profit to the Federal Government?

Colonel WHIPPLE. There would be no profit to the Federal Government on account of the inclusion of the power unless you consider as a profit the fact that the Federal Government would get the flood-control features at less cost by reason of this arrangement, as previously brought out by the chairman.

Mr. ANGELL. My question did not involve the construction by the city of Eugene. It was in the event the Federal Government should construct the entire project, both generating facilities for hydroelectric power as well as flood control, and should operate the generating facilities over a period of years. Would that result in a profit to the Federal Government from the sale of power?

Colonel WHIPPLE. That cannot be accurately foretold. The law only requires the reimbursement of the actual power costs. It does not require the return of a profit. On the other hand, a profit has in the past been returned in the case of the Bonneville project. There have been other projects which have not returned their full costs. So that the question as to whether there would be a profit or not—there is nothing in the law requiring a profit to be returned, and whether it would be returned depends on rate policy and the success in marketing the power.

Mr. ANGELL. It is true, is it not, Colonel Whipple, that the Bonneville project is ahead of amortization schedule on repayments?

Colonel WHIPPLE. It is very substantially ahead of the amortization schedule.

Mr. ANGELL. And at the end of the amortization period who will own the generating facilities at the Bonneville project?

Colonel WHIPPLE. The Federal Government would continue to own it.

Mr. ANGELL. In this case that differentiation would exist that instead of the Federal Government owning the property at the end of the amortization period, the city of Eugene would?

Colonel WHIPPLE. Yes, sir. That is correct.

Mr. ANGELL. I believe that is all, Mr. Chairman.

Mr. MACK. Mr. Watts.

Mr. WATTS. Colonel, the difference between this bill and the Bonneville situation is that the city of Eugene is originally putting up the money for the installation of the power facilities; is it not?

Colonel WHIPPLE. Yes, sir. Of course, that is the key to the entire situation. The city of Eugene in this case is making the total investment on account of power and will be operating and maintaining the power facilities and marketing the power and receiving back the revenues. The Federal Government will make no investment on account of power, and of course will receive no revenues on account of power.

Mr. WATTS. I read this resolution earlier, but it strikes me if it is passed the Federal Government would have no right or authority to install the power facilities themselves.

Colonel WHIPPLE. That is correct. The intent of the bill is very clear. It is very clear that the Federal Government would have no right at all to install power facilities or obtain any financial returns from the sale of the power on the project under this arrangement.

Mr. WATTS. I believe you stated earlier that by combining the two as provided for in this bill, that it would result in a savings to the

Government on the flood-control features. Did I understand you to say that, Colonel?

Colonel WHIPPLE. That is correct. On the basis of the tentative allocation we have made so far it would save the Government approximately a half a million dollars in the construction cost of the flood-control investment. Sir, when the time comes I would like to give you a little more on the cost allocation. I think it is fairly important to have something in the record on the basis of this.

Mr. MACK. The Chair will be very glad to have you do that, Colonel.

Mr. ANGELL. Before you do that can you give us percentagewise what the Federal costs and city of Eugene costs would be?

Colonel WHIPPLE. Yes, sir.

Mr. ANGELL. I understand in the McNary project 90 percent goes to the power allocation, or approximately 90 percent.

Colonel WHIPPLE. Yes, sir. In this case the results of the allocation of costs, which I would like to introduce in the record in the form of a table because it gives a more complete breakdown, is as follows:

Of the total construction cost of $37,400,000, the total allocated cost to the city is $10,523,000. The balance of slightly less than $27 million being the allocation to the Federal Government for the flood-control and water-conservation features. That includes also allocations to downstream benefits on account of irrigation and a minor amount of downstream power. But the allocation of the city is $10,523,000.

Mr. MACK. Colonel, nothing has been said as yet of the potential installed electrical capacity of the Cougar Dam. What will be the capacity?

Colonel WHIPPLE. If constructed and installed as a Federal project and in connection with or integrated with other units contributing to the Bonneville Power Administration regional transmission system, there would be installed, we believe, 25,000 kilowatts. The estimates I have given you for the cost are based on 25,000 kilowatts.

However, if constructed by the city it would be integrated into the city's direct requirements in accordance with the conditions of their own load and the potentialities of their plants, as distinguished from being tied into the overall system itself. Although they have a tie-in with the general system, their particular requirements indicate it would be more profitable for them to build a reregulating dam below this project and increase the power at the Cougar project from 25,000 kilowatts to 37,500. They would then be able to operate the dam for peaking purposes and get better results from their own financial point of view.

Mr. MACK. Are there any flood-control reservoirs contemplated on the stream above Cougar?

Colonel WHIPPLE. No, sir. There are not. The Cougar project has sufficient capacity for the purpose, and if not constructed for power we would not provide any additional flood-control storage. We do not contemplate the necessity or desirability of building any further reservoirs above it.

Mr. MACK. Where is the Green Peter Reservoir we discussed several days ago?

Colonel WHIPPLE. The Green Peter project is on the South Santiam River, which is——

Mr. MACK. It is not a tributary to the McKenzie, is it?

Colonel WHIPPLE. No, sir. It is a tributary to the Willamette. The Santiam River is approximately the same size as the McKenzie as a flood-producing tributary of the Willamette. The Green Peter project is generally similar to this one, but located on the tributary of the Santiam rather than the McKenzie.

Mr. MACK. Going back to the allocation of costs, what agency of the Government allocates the power and flood-control costs?

Colonel WHIPPLE. In some cases the statutes specifically provide for an agency to do that. The recent allocation on the McNary project, which has been mentioned, was made by the Federal Power Commission in connection with specific statutory authority.

In the case of this project the cost allocation as provided would be made by the Chief of Engineers in collaboration with the Federal Power Commission.

Mr. MACK. Who will take the necessary precautions to see that Eugene develops the maximum power capacity of the site, Colonel?

Colonel WHIPPLE. Under the bill the Federal Power Commission will be required to grant the license, and they will have certain responsibilities in connection with that. Also, the Corps of Engineers will have responsibilities in connection with the planning, and each of the agencies will have a responsibility to see if the potential development of the site is adequate to tie in properly to the comprehensive plan of development and to maximize the use of the water resources of the area.

Mr. MACK. The Federal Power Commission also will determine whether the city of Eugene is competent financially and otherwise to carry the project to completion and handle its operation?

Colonel WHIPPLE. Yes, sir. And this agreement requires the granting of a license for that purpose. The Federal Power Commission representatives are here today to testify regarding those procedures, if any questions are asked.

Mr. MACK. In this flood-control project are there any annual carrying charges, Colonel?

Colonel WHIPPLE. Yes, sir. There are the usual annual carrying charges. The amortization and interest on the construction investment, and of course the usual charges for operation and maintenance of the dam itself.

Mr. MACK. Will the city of Eugene pay any part of the annual operating charges?

Colonel WHIPPLE. Yes, sir. The city of Eugene will be required to pay all of the operation and maintenance charges pertaining to the powerplant and the power facilities themselves, and a small proportion of the operation and maintenance of costs for the dam itself, proportionate to the share of their investment in the dam itself.

Mr. MACK. Mr. Trimble, you had a question.

Mr. TRIMBLE. Colonel Whipple, the question I wanted to ask you has been partly answered in reply to a question from the chairman, Mr. Mack. Of course, it would not obtain in all projects, but I notice on the map and from your testimony that the city of Eugene, if this bill is approved, would benefit by reason of the power developed at the project, and will also benefit by reason of the flood control, quite a bit. I mean, it benefits by reason of the flood-control features as well as by reason of electric power.

Is that being taken into consideration in the allocation of costs? In other words, to clarify my question, if the Federal Government gets completely out of this picture it would cost the city of Eugene in the neighborhood of $37,400,000 to build the project. That would furnish the power they want out of this project and also flood control.

Colonel WHIPPLE. I do not believe that would happen. I do not believe they would do that because the city of Eugene, as you will see from the location, is slightly upstream from the junction with the Willamette River. I referred to Eugene as being the site of the junction between the two streams, but it is so situated that Eugene is more subject to floods from the upper Willamette River itself rather than the McKenzie, and the floods prevented from the McKenzie, although they affect certain outskirt areas of Eugene, are far more in the main Willamette Valley downstream.

So these flood-control benefits are not particularly limited to the city of Eugene but affect hundreds and hundreds of square miles of farm communities and other towns all the way down the Willamette Valley to the vicinity of Portland.

Mr. TRIMBLE. It affects its trade territory, but not the city itself?

Colonel WHIPPLE. The city itself is only affected at the outskirts. So there is not any direct relationship of the Cougar Dam to the city of Eugene that would make it appropriate to consider that, you might say, as a project relating only to that city. It is not local to that extent. Its benefits affect the entire Willamette Valley, as far as flood control is concerned.

As to the irrigable area—I might say there will be 65,000 acre-feet of reservoir storage for irrigation, and the irrigable area starts in the lower McKenzie Valley, but a greater portion of that is several miles lying downstream below the junction, and of course not directly tied in with the city of Eugene in any way.

So the benefits of this project are quite widespread and the direct relationship as regards power exists only because of the fact that the Eugene Water and Electric Board has developed the McKenzie River. You will hear more about that later. But they have other plants actually projected both above and below this plant, and some steam and some hydro, and they have been directed by court decision to serve not only the city of Eugene, but certain areas in the vicinity of the city. The power investment ties in very closely and directly to the power activities of the Eugene Water and Electric Board, but the flood control development is not directly and closely identified with the city itself.

Mr. TRIMBLE. Thank you very much, Colonel Whipple.

Mr. ANGELL. Mr. Chairman, may I ask an additional question of the colonel?

Mr. MACK. Mr. Angell.

Mr. ANGELL. Colonel Whipple, the fact that the generation of electric power is included in the project raises a question. Will that lessen the efficacy of the project for flood control?

Colonel WHIPPLE. In no way, sir. It may at times increase the efficacy for flood control by accidentally having some of the power storage empty at a time when it is needed for flood control, but it will not reduce the efficacy for flood control at all.

Mr. MACK. Dr. Neal.

Mr. NEAL. I have no questions.

Mr. MACK. Mr. Scudder.

Mr. SCUDDER. Colonel, I am sorry I was not here to hear your full testimony, but as I understand it, this entire project will cost about $37,400,000, of which the city of Eugene will contribute about $10,500,000.

Colonel WHIPPLE. Yes, sir.

Mr. SCUDDER. Is the balance of that to be paid by the Federal Government for flood control?

Colonel WHIPPLE. Yes, sir.

Mr. SCUDDER. Just looking at the map, I do not know what the flow of the river in question is. But is it a great part of the cause of the damage from flood hazards in the lower Columbia River?

Colonel WHIPPLE. Not in the lower Columbia River. No, sir.

Mr. SCUDDER. Does it contribute to flood conditions where the Willamette enters the Columbia?

Colonel WHIPPLE. It does not contribute at all to flood control in the lower Columbia River. Those floods in the lower Columbia River occur almost entirely in the spring and early summer. These floods on the Willamette occur almost entirely in the wintertime, so that the flood seasons do not coincide.

There are no flood-control benefits whatsoever contributing to this project, or any other Willamette project for flood control in the lower Columbia River.

Mr. SCUDDER. How do you justify the expenditure of two-thirds of that amount of money for flood control on this project?

Colonel WHIPPLE. The allocation of benefits is based on the fact that almost the entire lower part of the Willamette Valley has been covered by floods several times in the past. Damaging floods occur in some parts of the Willamette Valley almost every year. I, myself, have flown over this area in what was considered a minor flood and seen water almost as far as the eye could reach from a low-flying airplans, with houses and fences and barns sticking up above the surface of the flood. It is a very thickly populated area and a very wealthy farming and commercial and industrial area.

The flood damages that will be prevented by this project, although it looks small with reference to the total area involved, are approximately $1,700,000 a year.

I would like to pull this other map down again and refer to the total number of reservoirs we have authorized in that valley.

The Willamette Valley includes the lower portions of Portland, Oreg., at the mouth. It includes the capital city of Salem and extends up past various other communities to Eugene, which is at this point.

Mr. ANGELL. If I may interrupt, that map shows the comprehensive plan for flood control of the Willamette Valley area about which we talked a moment ago?

Colonel WHIPPLE. Yes, sir. It does. And it shows the dams that have already been built. There are a total of 15 reservoirs authorized for flood control and multiplepurpose development on the Willamette at the present time. The Detroit project, the Lookout Point project, the Dorena project, Fern Bridge, and Cottage Grove, the last two being relatively small, have already been completed. The remainder are authorized and the benefit-cost ratio is relatively high for these projects as flood-control projects.

This project, forgetting all about the power, has been authorized now for flood control for a number of years and is a very fine flood-control project in its own right entirely irrespective of whether you build power facilities in it or not.

Mr. SCUDDER. I was with the committee about 2 years ago when we were in that general area, and particularly at the Detroit Dam. What is the arrangement at the Detroit Dam as far as power is concerned?

Colonel WHIPPLE. The power at the Detroit Dam was authorized and built by the Federal Government and is connected up to the Bonneville Power Administration transmission lines, and is sold through that agency.

Mr. SCUDDER. Is the power as compared with the flood damage proportionately about the same as the proposed project?

Colonel WHIPPLE. The installed capacity there is approximately three times as great. It is 100,000 kilowatts. This particular project is considerably smaller than the Detroit project. It will cost less and both the power is considerably less and I believe the flood control is also considerably less than the Detroit project. They are, however, generally similar projects except that Detroit was built as a high-concrete dam, whereas this would be built of rockfill. But their operations and the effects on flood control as contrasted to the power operation are very similar, except that this project is actually better located, with a view to flood control, although smaller, than the Detroit project is.

I say that because the Detroit project can only affect the Santiam River itself and the lower part of the main valley, whereas this project, the Cougar Dam project, will help practically all of the flooded area of the Wallamette Valley.

Mr. SCUDDER. You said some time ago a new formula was being worked out for the allocation of different phases of these projects.

Colonel WHIPPLE. Yes, sir.

Mr. SCUDDER. I have always been under the impression that the power authority and those interested in socialized power have exerted a great influence in seeing that the formula developed favored public ownership of power. The only reason we have so-called cheap power is that so many charges are allocated to flood control navigation, etc., the Federal Government as a whole assumes a big portion of the cost of these projects.

That is my personal opinion, but I still contend there is no such thing as cheap power. If the Government paid taxes, interest, and amortized the cost of these projects.

I am glad to see that somebody besides the Federal Government is putting money in these projects. Where there is so much Federal participation we are simply kidding ourselves about cheap power.

Colonel WHIPPLE. I would like to state, Mr. Scudder, that insofar as the Corps of Engineers is concerned that we regard the cost allocations that have been made in the Columbia Basin, particularly the recent one at McNary, as being on a very conservative basis. Yet they will allow the generation of power at approximately 2.6 mills at the McNary project, where so many people are saying that too much has been allocated to the power costs; 2.6 mills is, for most parts of the country, phenomenally cheap power.

In the case of the Pacific Northwest there are available projects which are still cheaper.

Mr. SCUDDER. Of course, that takes into consideration cheap money, no carrying charges, no thought to amortization of principal, no interest, and no taxes to pay.

Colonel WHIPPLE. Not quite, sir. I beg your pardon.

Mr. SCUDDER. But it did have quite an influence.

Colonel WHIPPLE. I beg your pardon. It does include full amortization of the investment within 50 years, and does include the payment of interest and operation and maintenance charges.

Mr. Scudder is right, however, that the rate of interest is not the same as that which private capital pays. It does not include the payment of taxes, although that element is being taken into account in this agreement which has been recently had between the agencies.

Mr. SCUDDER. I hope it is not only taken into account, but is proven an actuality.

Mr. ANGELL. Will the gentleman yield for a moment?

Mr. SCUDDER. Yes.

Mr. ANGELL. What is the estimated cost of a kilowatt from this project?

Colonel WHIPPLE. From this project under the allocation now proposed the cost of a kilowatt-hour will be something over 4 mills.

Mr. ANGELL. It is a rather high cost compared with the others in the Columbia River area.

Colonel WHIPPLE. That is correct. On the other hand, it has the advantage of being extremely well located with respect to the transmission system of this particular utility. The storage will have a beneficial effect on their downstream plants. The peaking capability it will allow to be introduced by the additional installation they contemplate will have other benefits.

In the Pacific Northwest this is not as cheap for a kilowatt-hour as some of the larger projects. It is cheap enough so that the city of Eugene considers that it is a profitable investment, and of course they will testify to that when the time comes.

In connection with this I would like to bring out one point on that cost allocation. I think it is sufficiently important to enter into the record, so that there will be an understanding of the basis we have been talking about in quoting the results of this cost allocation. The basic principles we are working on and which are embodied in our interagency agreement, include the two limiting points in an allocation to power.

In the first place, we always allocate to power at least the incremental costs of including power in the project. In this case it is approximately $10 million. That is, the additional cost required to put the power in the project over what would otherwise be built, is always allocated to power. That is the base.

The ceiling we set for an allocation is, you might say, a twin ceiling. In the first place, we will never allocate to a project purpose more than the economic benefits of that project purpose. Nor will we allocate to a project purpose more than the costs of building a feasible alternate to provide that purpose alone.

Normally that would mean in a multiple-purpose project the ceiling would be the cost of a power project for power alone, forgetting about flood control, built at the same or an adjacent site. In this case we feel that cognizance should be taken of the fact that the city of Eugene does have available and can obtain power from other Federal projects

that are being built throughout the Pacific Northwest. So as a practical matter we have to take into account in the allocation the known and definite availability of power for them, from the projects that are now being built, and later from other future projects which, of course, are more expensive and will be completed in the future.

So we have taken all those factors into account in arriving at this cost allocation. We think it is a fair allocation and it is our best interpretation of the provisions of the separable-costs-remaining-benefits method and the recent interagency agreement on that subject. However, it is tentative because of the fact that final planning has not been completed. Final cost estimates will not be available until details of design are complete. Furthermore, the Federal Power Commission, who are to collaborate in the final cost allocation, have not yet had the time to review and be brought into the picture fully on this particular figure.

I wanted to give that qualification and explanation because this figure of $10,500,000 that I have given to you comes about through this background, and I think it is important that the committee understand the principles on which we arrived at that result.

Mr. SCUDDER. I am very glad to get that explanation. I have always had a very tender spot for Eugene. A few years ago I worked with folks in that area to run some real estate racketeers out of business. I was a real estate commissioner in California. We had very fine cooperation with the Oregon officials on that occasion.

I do realize that the city is growing and is in a very strategic position in Oregon. Not only that, but it is represented by my friend and a very stalwart American, Harris Elsworth.

Mr. MACK. The Chair has a statement to make of interest to the witnesses. The Chair is endeavoring to obtain through Mr. Dondero, chairman of the full committee, permission of the House for this committee to sit this afternoon starting at 2 o'clock. If that permission is obtained—and I think it will be—then a session of this committee will be held this afternoon at 2 o'clock in order to provide witnesses who have come a great distance, an opportunity to be heard.

Mr. Bush, do you have any questions?

Mr. BUSH. No questions.

Mr. MACK. Dr. Neal.

Mr. NEAL. Colonel, would you mind discussing the matter pertaining to the criticism of private-power producers in which they claim that hydro power is always produced at so much less cost than they can possibly produce it by steam or other fuel? What would be the effect if the Government or the Corps of Engineers were to base the cost of power production on an amortizing period of 25 years instead of 50 years? What, in your opinion, would be the effect toward bringing the cost of the production of hydro power more nearly to the point that now exists as it is produced by private power and by coal and other fuels?

Colonel WHIPPLE. The amortization within 25 years would, of course, add to the fixed charges, and in your amortization I think you would probably add approximately somewhere between 15 and 20 percent to the cost of power from each Federal project.

Mr. NEAL. You think it would not add more than 15 to 20 percent to the cost?

Colonel WHIPPLE. No, sir. The reason why is that at the present time we have charges for operation and maintenance. We have charges for distribution in one way or another. The interest rate is 2½ percent. That is what we charge. The amortization in a 50-year period at 2½ percent is 1.02 percent, if my memory serves me right.

So the amortization and interest together would be raised from 3½ to 4½ percent. I do not have the amortization available for 25 years, but I think it is probably around 2 percent instead of 1 percent. If that is the case it would be 4½ percent instead of 3½ percent.

Amortization in 25 rather than 50 years will raise charges from 3.52 to 5.42 percent. This would raise the cost of power at load centers about 40 percent.

Mr. SCUDDER. Will the gentleman yield for a question?

Mr. NEAL. Yes.

Mr. SCUDDER. Colonel, what is the average long-term interest rate that the Federal Government has to pay for money on long-term loans?

Colonel WHIPPLE. We understand it is the same as the rate that the Bureau of the Budget wishes us to use for amortization purposes at present, which is 2½ percent.

Mr. SCUDDER. Do you have any idea what it costs the Government to issue bonds, pay interest, and operate the servicing of the long-term bond sales and interest payments? In other words, what does the taxpayer have to pay over and above 2½ percent interest? Do you have any idea what that charge would be for making loans and collecting from the projects they operate?

Colonel WHIPPLE. Sir, it would depend a good deal on the condition under which the bonds were sold. There have been various proposals and thoughts on that subject. In some of these proposals the Federal Government guarantees the revenues from the bonds either directly or indirectly. In other proposals the people would have a reasonably free play in operating the investment, but they would not have the income guaranteed. In other cases it might be the participation of the Federal Government would expose these people to uncertainties as to whether they would make their money.

So I do not believe we are prepared to make any estimate right now as to what it would cost to change to private financing of the Federal power investment. There are a number of intangibles, and we have seen a number of different proposals advanced and a variety of figures quoted as to the conditions under which such bonds could be financed.

Mr. SCUDDER. But these projects, even though we figure it down to the cost of the power facilities, are all subsidized by the common taxpayer and they are not paying off as is generally claimed for these projects. In other words, the general taxpayers are subsidizing these projects over and above your figures as to the actual costs for power development.

I am interested in this subject because I have tried to develop sound business in these projects, and I do not believe at the present time we have an honest approach when we are charging 2½ percent interest plus amortization of the project.

I hope that sometime we can come up with a realistic figure so that the general taxpayer is not paying for benefits to isolated segments of our country.

Colonel WHIPPLE. Sir, I can give you a general answer to that right now. That is, I happen to have studied some economics, and being stationed in the Northwest, and being intimately associated with these projects in their planning for 3½ years, I have given some thought to the questions that you raised.

So far as I myself feel, I think that the Federal Government is getting value received, and the people are getting value received from the way these projects are being handled in this area we are talking about particularly, because the revenues are sufficient actually to return and amortize the power investments that have been made at the rates of interest the Government is paying.

As regards the other question of the taxes, this power is being sold at rates that are much lower than the power could be produced by any other means that were employed by the private companies, or within the scope of the private companies at any time in the past. Very much cheaper. And while these large projects with their enormous capital costs do not pay ad valorem taxes, the difference to the region itself, and the advantages in having this extremely low cost power, far outweighs the taxes and the revenues that would be lost to those areas concerned.

Mr. SCUDDER. Yes. I am thinking of what the Government carrying charges must be in these large projects. I am thinking of the cost of borrowing money and servicing the same, which must run into hundreds of millions of dollars to the United States, and not being paid by the area getting the benefit. The general taxpayers throughout the country have hidden charges that they are paying for.

I am very much interested in this subject, and I hope sometime we can develop the hidden cost to the taxpayers of the country on these public projects.

Colonel WHIPPLE. They are also getting hidden benefits, if I might say so. The revenues on account of the Bonneville project, for example, have been approximately a half a million dollars over and above the required amortization charge over the last few years, and will continue so indefinitely for the future. Those funds revert to the general fund of the Treasury. So I believe on the part of the general taxpayers that although the money, of course, must be appropriated and paid for at that time, it is all being returned to the Treasury in sufficient amount to amortize the investment. But that is all a very broad subject, and I would not like to attempt to give you a complete answer now.

Mr. SCUDDER. Yes.

Mr. NEAL. Mr. Chairman.

Mr. MACK. Dr. Neal.

Mr. NEAL. Along that line, in many areas where hydropower is being produced there is insufficient water to assure all the year-round production. It then becomes necessary to supplement the power by some other means, does it not?

Colonel WHIPPLE. Yes, sir.

Mr. NEAL. In that case the Government either must go along and produce that power by other means and maintain the price standard that is set for the production of power by hydro, or else they must call upon private industry to help along.

Now, my thought in asking that question in regard to the amortization period was simply to raise the question whether it be practicable

at all for the Corps of Engineers and the other agencies of Government, who have the right and the authority, to make these charges and fix the rates—might it not eventually work a good bit better if the base on which the Government can produce power, or any agency such as this one here, for distribution in certain areas—might it not be more equitable if some system of amortization, or some other element of cost, could bring this thing up to the point where hydropower and power produced by coal, let us say, could equal more nearly in the cost of production?

Colonel WHIPPLE. Sir, in this particular area I do not think that would be applicable.

Mr. NEAL. It is probably not true in this particular area. Yet it does exist in certain other areas. Of course, it is pretty hard to make a general rule as affects the whole country. But we do find most of the people who are interested in private industry always complain that these particular areas where they have special advantages are receiving benefits at the expense of the country. And it is more or less true if you look the picture over.

Colonel WHIPPLE. I would think this particular proposal today would largely satisfy your point in that respect, since it is proposed here that the power investment be advanced entirely by the city of Eugene and obtained through private capital.

Mr. NEAL. This is a project all of its own. I can see that.

Colonel WHIPPLE. Yes.

Mr. MACK. Commenting on what Mr. Scudder said, I would like to say a friend of mine the other day told me he had lost $100,000 in Cities Service. I asked him how he lost so much money, he told me he lost it because he did not own any Cities Service stock. He did not have any of the stock. This seems to be the case here. If the Federal Government had not built the Grand Coulee, Bonneville, McNary, the Dalles, and Chief Joseph Dams, and those other huge dams, it is not likely that private capital would have built them. Private capital did not build them, although those sites lay there unused for a great many years. We would have had to find some other source of energy to produce aluminum that is so vital to our country's needs.

There is just one question the Chair would like to ask. This is an authorized project in the Willamette Basin overall authorization?

Colonel WHIPPLE. Yes, sir.

Mr. MACK. Does this authorization carry with it monetary authorization? Is the $27,500,000 for flood control so authorized that the Appropriations Committee could recommend to Congress appropriation of that amount of money if it elected to do so?

Colonel WHIPPLE. It is included in the overall monetary authorization, but not for the power project.

Mr. MACK. Then if Congress should approve this legislation, the next step would be for those interested in the Eugene project to go before the Appropriations Committee and seek to secure an appropriation for the flood-control features of the Cougar Reservoir and get their permit from the Federal Power Commission to go ahead and invest their $10 million along with the $27 million of the Federal Government in this project?

Colonel WHIPPLE. Yes, sir. However, the next step would be a requirement for planning funds, because we would not be ready to initiate construction at this time.

Mr. MACK. What would be the amount of money needed for planning funds?

Colonel WHIPPLE. I cannot give you that offhand, but I can have it inserted in the record.

(The matter referred to is as follows:)

The amount of $200,000 would be needed the first year to complete the general design memorandum for the Cougar project, including studies adequate for partnership arrangements with the city of Eugene.

Mr. MACK. The Federal Government, as the Chair understands it, is anticipating $27 million for the flood control features, and the city of Eugene $10 million for the power features of this Cougar Dam. Some people may feel that Eugene is getting a pretty good bargain with the Government putting up $27 million as against only $10 million from the city of Eugene. The Chair observes that for $10 million the Eugene will obtain 25,000 kilowatts of installed capacity. If the 25,000 kilowatts were to be multiplied by 40 then the result is 1 million kilowatts of installed capacity. The cost is 40 times $10 million, or for $400 million. In short, the amount of money that the city of Eugene will be paying per kilowatt for power on this project is higher than the Federal Government is paying per kilowatt for power at Bonneville, Grand Coulee, the Dalles, or Chief Joseph Dams, is it not, Colonel?

Colonel WHIPPLE. That is correct. At each of the projects you have mentioned, at the rates that they will be obtaining for it and with the interest as cheap as it is for the very large projects you mentioned.

Mr. MACK. According to the records of the Army engineers then the city of Eugene will be paying a pretty substantial price to obtain hydroelectric energy from the Cougar project, even if it can build it, for $10 million?

Colonel WHIPPLE. Yes, sir. And the only reason they are able to do that financially is the fact that the power is right at their back door and ties in very conveniently with their other operations; and the transmission system that they can build to serve a variety of projects, and the additional peaking capacity it will give them to their system has certain technical advantages. But they are not getting a cheap bargain in terms of cost per kilowatt.

Mr. MACK. I have no other questions. Are there any from the others?

Mr. NEAL. One other question.

Mr. MACK. Dr. Neal.

Mr. NEAL. Colonel, the rates to the consumers in Eugene would not be fixed on the basis of this expenditure by the city of Eugene, but would be blended in with the general rate of distribution over the whole system?

Colonel WHIPPLE. No, sir. That is not correct. The rates to the customers would be based on the system of the city of Eugene with its water and electric board. They will not necessarily pay the same amount per kilowatt-hour as indicated here because they get the benefits of diversity and the system advantages only within the system we are talking about. This is a tailormade and relatively small system. This project has considerable system advantages, but it is with relation mainly to the Eugene system and not the entire Bonneville Power Administration.

Mr. MACK. According to the previous announcement of the Chair an effort will be made to resume the session of this committee at 2 o'clock this afternoon. The session will be resumed provided the Chair obtains permission of the House, which I think we will be able to obtain, to sit during the general debate on the pending bill.

The session is now recessed until 2 o'clock this afternoon.

(Whereupon, at 11:10 a. m. the hearing was recessed until 2 p. m. of the same day.)

AFTERNOON SESSION

Mr. MACK. The Subcommittee on Flood Control will resume its session.

Are there any further questions from members of the committee for Colonel Whipple?

(No response.)

Mr. MACK. If not, we will call the second witness, who is Mr. Gatchell of the Federal Power Commission.

At this point the Chair directs that the communications on this legislation from the Bureau of the Budget, from the Department of the Army, and from the Federal Power Commission, all in support of this legislation, will be introduced in the record immediately following the bill.

(The table submitted by Colonel Whipple entitled "Cougar Dam and Reservoir Tentative Allocation of Cost" is as follows:)

Cougar Dam and Reservoir, tentative allocation of cost, Apr. 27, 1954

Item	Total cost	Cost of work by city	Additional contribution by city	Total allocated cost to city
I. Construction costs:				
Powerhouse, switchyard, and equipment	$4,185,000	$4,185,000	0	$4,185,000
Power intake works	2,143,000	1,825,000	$318,000	2,143,000
Joint use facilities	31,072,000	0	4,195,000	4,195,000
Total	37,400,000	6,010,000	4,513,000	10,523,000
II. Operation and maintenance:				
Power facilities provided by city	103,300	103,300	0	103,300
Facilities provided by Government	188,100	0	22,600	22,600
Total	291,400	103,300	22,600	125,900

STATEMENT OF WILLARD GATCHELL, GENERAL COUNSEL, ACCOMPANIED BY FRANCIS ADAMS, CHIEF, BUREAU OF POWER, BOTH OF FEDERAL POWER COMMISSION

Mr. GATCHELL. Mr. Chairman, my name is Willard Gatchell. I am General Counsel of the Federal Power Commission. We have here Mr. Francis Adams, who is Chief of the Commission's Bureau of Power, in charge of the engineering phases of our licensing work.

Mr. MACK. You may be seated, if you wish.

Mr. GATCHELL. Thank you.

We have no prepared statements to make because we have put into the Commission's reports all of their views on the bill, but we will certainly be glad to answer any questions the committee may have if we can do so.

Mr. MACK. Are there any questions, Mr. Angell?

Mr. ANGELL. I have no questions.

Mr. MACK. Dr. Neal?

Mr. NEAL. No questions.

Mr. MACK. I have no questions, Mr. Gatchell. Thank you very much. Your report on this project is favorable?

Mr. GATCHELL. Yes, sir. It is. The Commission recommended it because this is the principle on which the Power Act really was based, and the Commission recommends the enactment of the bill.

Mr. ANGELL. Colonel Whipple reported to the committee this morning and advised on the allocation of costs as between power development and flood control that it would be made by the Army engineers in consultation with the Federal Power Commission. That is a correct statement, is it not?

Mr. GATCHELL. It would be made under the bill that way. Yes, sir.

Mr. ANGELL. What is your comment, if you have any, with reference to the method of allocating the costs as to whether it is in your judgment a desirable way to have the allocation made as set up in this bill?

Mr. GATCHELL. Yes, sir. I do not think there is any question about that, but Mr. Adams, who has worked on the allocations on a previous basis from an engineering standpoint, could discuss it with you more at length if you desire that, Congressman.

Mr. ANGELL. We are just seeking information. That is all.

The allocation method set up in the bill is not the same as the method for allocation of costs on the Columbia, for instance.

Mr. GATCHELL. It is the method recommended by the Federal Power Commission and followed by them for several years. It was agreed to on the Federal Interagency River Basin Committee, which drafted the principles of allocation, and has been followed by everybody except the Department of the Interior, up to just recently. Just recently the Department of the Interior agreed to that method.

Mr. ANGELL. So in your judgment that method of allocation is a desirable one in this bill?

Mr. GATCHELL. It certainly is. Yes, sir.

Mr. ANGELL. That is all, Mr. Chairman.

Mr. MACK. Are there any other questions?

(No response.)

Mr. MACK. Thank you very much, Mr. Gatchell, for your testimony.

Mr. GATCHELL. Thank you, sir.

Mr. MACK. The committee has before it Congressman Harris Ellsworth, the author of this legislation, who has been pressing the committee very vigorously for hearings on his bill.

The committee will be very pleased to hear from our colleague, Mr. Ellsworth, and to have him introduce any witnesses whom he cares to introduce in favor of this legislation.

STATEMENT OF HON. HARRIS ELLSWORTH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON—Resumed

Mr. ELLSWORTH. Mr. Chairman and members of the committee, before introducing some of the witnesses who have come here from Oregon to testify, I would like to make a very brief statement myself.

I think most of the comments I shall make will probably be touched upon later in the testimony. However, I think I should point out to the committee, after the testimony heard this morning regarding this project, 1 or 2 points which were not brought out by the engineers, but which have a very important bearing on the matter.

There are two ways in which this flood-control project may be built. One is, as pointed out by Colonel Whipple, by the Federal Government as a flood-control dam and reservoir, which dam and reservoir would cost some $37,500,000 and would develop only 25,000 kilowatts of power as a byproduct of the flood control.

Another way of building the project, of course, is as contemplated in this bill, namely, in cooperation with the city of Eugene, through the Eugene Water and Electric Board.

I want to point out that if the Government alone builds the dam only 25,000 kilowatts of power will be developed. If the partnership plan is followed 35,000 kilowatts will be developed, or some 40 percent more power will be derived from this water by the Eugene Water and Electric Board plan than would be the case if the authorized dam is built by the Government alone.

Our area in Oregon is badly in need of power, so I consider it a very important point in favor of this legislation that not only will we be saving the Government an expenditure of $10,500,000 in the construction of the project itself, but we will obtain 40 percent more power.

Also it was not pointed out, and I think it is very pertinent to the problem, that if the Federal Government builds the Cougar Dam and powerplant as a Federal flood control and power project, from that point some 52 miles down to or near the city of Eugene the Government will also have to build a very expensive transmission line. The cost of that transmission line should be added to the $37 million cost of the plant when we consider the Government's money obligation in this project.

I believe the Eugene Water Board witnesses will further develop that point.

Mr. MACK. Mr. Ellsworth, the cost to the Eugene district is $10 million for its share of the construction of the dam. That does not include the powerline, does it?

Mr. ELLSWORTH. That is right. Its construction only. The water board already has a powerline as far as Leaburg. The Eugene Water Board is building small hydroplants up the river, so it will have a transmission line past the Cougar Dam is any case.

But the Eugene Water and Electric Board will, of course, pay for the cost of all the transmission line, and it makes a very economic operation for the water board.

Mr. MACK. You have stated, Mr. Ellsworth, that if Eugene undertakes the production will be 35,000 kilowatts.

Mr. ELLSWOTRH. That is right.

Mr. MACK. This compares to the suggested Federal project of 25,000 kilowats. How do you obtain that additional 10,000 kilowatts?

Mr. ELLSWORTH. The fact that Eugene will build a reregulating dam below the Cougar flood control dam. That, plus such other changes in plans of the generating plant as they have proposed, will account for the increased power.

Mr. MACK. And Eugene will supply all of the costs and money for building the reregulating dam?

Mr. ELLSWORTH. Eugene will build the reregulating dam entirely on its own under license by the Federal Power Commission.

I would like to read into the record at this time a statement issued by the White House—and this is a direct statement by the President—on February 10. This statement says:

> By joining with the Federal Government in the multiple-purpose development of the McKenzie River, the city of Eugene, Oreg., is pioneering in the new concept of power development in the Pacific Northwest.
>
> I have had an opportunity to study the program which the Eugene Water and Electric Board and the Corps of Engineers have jointly developed. Under the plan, the Federal Government will undertake the construction of flood control works on the McKenzie and the city will underwrite the cost of construction of power facilities and transmission lines.
>
> This program, when carried to a successful conclusion gives the local people a responsibility in the important development work. It is true partnership and conforms to the power policy of this administration.
>
> Legislation has been introduced by Senator Cordon and Congressman Ellsworth to carry this policy into effect.

May I say further, although the reports filed with the committee will be printed in the record, the Bureau of the Budget says in its letter reporting to the committee on its views on this bill,

> The Bureau of the Budget favors enactment of H. R. 7815.

Now, not a great deal was said this morning about the very grave need for the construction of this project for flood control purposes. A condition has developed in the Willamette Valley flood-control system that was not anticipated at all as the project has developed. Some of the members of the committee heard the testimony regarding the Green Peter Dam, and this dam at the hearing on the authorization bill previously.

You will notice from the map that the McKenzie River comes down to join the Willamette River near the city of Eugene. Also you will notice that the two rivers for a space are quite close together. The Willamette River is controlled by a dam known as the Meridian Dam at Lookout Point. Therefore its flood stage is much less when the water is high than the uncontrolled McKenzie, with the result that there is a tendency for the higher flow of the McKenzie River to break through above Springfield and Eugene and cross over into the Willamette and inundate the very valuable bottomland between the two rivers.

It just happens with the one river being controlled and the other one not controlled, as at present, that there is rather more damage being done by floods in that immediate area than was ever done before, which makes it a pressing need that this project be started as soon as possible.

In that connection, the Willakenzie Grange, which is the Grange whose members live in the McKenzie area, wrote a letter, in fact a resolution, which I believe was directed to the committee but was sent to me. It is a very short resolution and if I may I will read it into the record at this point.

The resolution from the Willakenzie Grange No. 498, Eugene, Oreg., reads as follows:

> At a regular meeting of the Willakenzie Grange No. 498 held at the hall April 3, 1954, it was unanimously resolved that we urge the Congress of this United States of America to appropriate funds for the survey and planning of the Cougar Dam on the McKenzie River, said planning to be done to include

the cooperation of the Eugene Water and Electric Board in installing power facilities and certain construction work on said dam.

We wish to take this opportunity to bring to your attention the fact that the Willamette River is now controlled by the authorized Willamette Basin project, but that the McKenzie is not in any way controlled although authorized. The condition is now such that the balance of nature is upset and great damage is being done to the farmland at the confluence of the two rivers.

We urge that this appropriation be made in 1954 so that the project can be started as soon as possible and before more unnecessary damage is done.

GEO. D. BIDWELL, *Master.*
BERNICE JENSEN, *Secretary.*

Now, Mr. Chairman and members of the committee, I would like to present to you Dr. A. T. Oberg, of Eugene, who comes here not only representing the Eugene Chamber of Commerce flood control committee, but Dr. Oberg is a pioneer in the flood-control development work of the entire Willamette Valley. He served on the Willamette Basin Commission for many years, and we look upon him in that area as one of the fathers of flood control on the Willamette.

So at this time I would like to have you hear from Dr. Oberg.

Mr. MACK. Congressman Ellsworth, before Dr. Oberg testifies, could you tell us what the population of the city of Eugene is?

Mr. ELLSWORTH. About 39,000.

Mr. MACK. Does this municipal electrical utility supply service to any areas outside the city of Eugene?

Mr. ELLSWORTH. Yes.

Mr. MACK. What would be the population of the outside area?

Mr. ELLSWORTH. May we hold that testimony until the Eugene Water Board people are on the stand?

Mr. MACK. Yes. One other point. Is there any other distributor of electrical service within the city of Eugene other than this one publicly owned utility?

Mr. ELLSWORTH. No. None at all. Not within the city.

Are you ready to hear Dr. Oberg?

Mr. MACK. Yes, the committee will be pleased to hear from you, Dr. Oberg.

STATEMENT OF DR. A. T. OBERG, EUGENE, OREG.

Dr. OBERG. With your permission, Mr. Chairman, I have a written statement which is available to all of the members of the committee, but I would prefer to speak orally, if I may.

Mr. MACK. You have the permission of the Chair to insert this statement in the record, if you wish.

Dr. OBERG. Thank you.

(The prepared statement of Dr. Oberg is as follows:)

REPORT ON FLOOD CONDITIONS ON MCKENZIE RIVER, OREG.

(By Dr. A. T. Oberg, Eugene, Oreg.)

I am Dr. A. T. Oberg, practicing dentist of Eugene, Oreg.

Flood control on the McKenzie River is desperately needed. I shall first give some geographic and climatic background.

The Willamette Valley is about 150 miles long, and from 20 to 60 miles in width. Flowing throughout its length is the Willamette River, one of the few streams in our country that flows north. To the west it is bounded by the Coast Range, not very high, and on the east by the high Cascades, ranging up to 10,000 feet in altitude, with perpetual glaciers. The region is generally known as one with

much rainfall. This is not entirely true, since our mean annual rainfall is about 3 inches less than that of, for instance, Baltimore or New York. The difficulty lies in the distribution of that rainfall. The bulk of our rain comes during the months of November, December, January, and February. During the summer months we have an average period of 70 days, during which little if any rain falls. It is this heavy precipitation which produces our problems during the winter months.

Let me mention the conditions that produce our floods. A heavy fall of snow in the mountain regions, and some lower levels; saturated or frozen soil unable to absorb additional moisture; and warm rain accompanied by a warm Chinook wind. When these conditions coincide, as they do from 1 to 3 times each season, the tributaries, of which the McKenzie River is a major one, become raging torrents. Water pours into the floor of the valley at a terrific rate. Now the floor of the valley is relatively flat, and the rate of fall of the river is very small, from an altitude of about 400 feet at the head of the valley to 22 feet where the river flows into the Columbia near Portland. The valley floor cannot contain the floods from the tributaries within river banks, with serious and costly flooding in the valley floor areas, interruption of normal commercial operations, transportation, school, and other losses which I shall mention.

The only feasible way to control these floods is in the tributaries. Once the water reaches the floor of the valley it cannot be controlled.

Let us look at some of the additional problems created. Some of the most valuable agricultural lands in the United States lie in these river-bottom areas. This land might be nominally evaluated at $1,000 per acre, but when crops of high-grade products, such as Blue Lake beans are raised, the land has been known to amortize itself in a period of 3 years. The $1,000 per acre evaluation would, therefore, seem much too conservative. Our own cannery at Eugene plans to can some 9,500 tons of these beans this season, in addition to large quantities of beets, carrots, and corn raised on these lands.

This is the land which is being lost in these floods. About $1 million worth of this marvelous soil is being washed into the Pacific Ocean each year, with peak years much higher. This is a loss greater than the immediate loss to the landowner. It is a loss of all of the productive value of this land for the foreseeable future of our civilization. It is a loss that cannot be restored, or replaced. It is a loss of our Nation's most valuable physical asset, its land.

This portion of the flood problem is not new. It was there when flood control on the McKenzie River was first authorized in 1938. It has, of course, increased as the amount of agricultural development has increased, but is basic so far as the land loss is concerned.

There is, however, a new and serious situation developing. If you will look at the map you will find a V-shaped delta area lying between the Middle Fork of the Willamette River and the McKenzie River. This land is, for the most part, low, with little natural drainage. Up to some 7 or 8 years ago, it was largely used for orchards, dairy purposes, and small farm plots. Today it is different. This, being the direction in which much new suburban development is occurring, both from the city of Eugene and the city of Springfield, there now are many hundreds of suburban homes there, many of them ranging in value from twenty to fifty thousands of dollars.

Here is where the new problem arises. While both the Willamette and McKenzie Rivers were flooding, the waters reaching this area were slack—the flood from one river offsetting that from the other and leaving a simpler problem of inundation in its wake. Now we have flood control virtually completed on the middle and coast forks of the Willamette. During our latest flood, in November 1953, the crest of the flood in these rivers at Eugene was reduced by some 6½ feet, and could probably have been reduced more had facilities been completed and the need existed. But, there was no control on the McKenzie. Its raging force swept into this valuable delta area, and, lacking the counterbalance of the Willamette flood, achieved high velocity and produced much scouring. The danger lies in the fact that while one river is controlled, and the other is not, there will be a new channel scoured out between them, cutting through a very valuable and highly developed suburban area.

I have confined my talk to flood control on the McKenzie River, which is the one upon which the proposed Cougar Dam will be constructed. I am not unmindful of our need for additional power, and water for supplemental moisture purposes during our dry season. I am very much in sympathy with these developments, and most certainly favor their progress. Yet there is one fundamental fact. Until we can get control of these waters, no other use can be made

of them. I have lived in these areas for some 27 years, and seen the phenomenal growth. While flood control on the McKenzie River would understandably be an academic problem with people in other sections of the Nation, it is a very real problem to us. I have lived with these floods from year to year; seen the damages and the human misery they cause; and I can conceive of no greater service to my community than to work for their abatement.

Let me repeat. There is no more urgent problem in our area today than control of the flood situation on the McKenzie, and I must respectfully urge that you enact the necessary legislation in order that this may be accomplished.

Dr. OBERG. As mentioned by Mr. Ellsworth, I am Dr. A. T. Oberg, a practicing dentist in the city of Eugene, Oreg. I live in the area affected chiefly by these floods. I can get into my car and drive in a little over an hour from my home to the Cougar Dam site. I think I am very familiar with the whole area.

There are one or two things I want to point out by way of orientation. They developed partly in my mind from questions asked by members of the committee this morning.

First of all, our valley runs north and south. It is about 150 miles long and varies in width from 20 to 60 miles. The western boundary of that valley is the Coast Range, which is not very high. The eastern boundary is the high Cascade Range. There we have perpetual glaciers on top of 10,000-foot mountain peaks.

We talk about floods. Our area has the reputation of being a rainy area. They talk about perpetual rain in the Northwest. That is not entirely true. Annually our mean average annual rainfall is about 3 inches less than the city of New York or the city of Baltimore. The trouble with our rainfall picture is that nearly all of it comes in 4 months of the year—November, December, January, and February. We have ideal conditions for floods, which are mainly these: First we have the low hills and then the high mountains behind them. We have a heavy snowfall on top of some saturated soil that cannot take it any more, and then we get a warm spell and a warm rain, and all of that water comes down into the floor of the valley all at one time.

Now, once that water gets down into the floor of the valley we cannot do anything with it. Geologically the Willamette River is a very low-graded stream. On the other hand we have these very rapid tributaries coming in from the mountains. The only hope we have of controlling that water is to do it before it gets down there.

Parenthetically introducing something now, we have about 70 days in the summertime when we have practically no rain at all, and it is in the latter half of our best growing season, with the result that if we would just use a little commonsense and do a lot of saving of water in the wintertime when he have too much and use it instead in the summertime when we do not have enough, it seems like that would be a very good working arrangement.

Several mentions have been made by Colonel Whipple and Mr. Ellsworth of this area right in here [pointing to map]. We have some very valuable bottom land in here. Some of that stuff will run as high as $1,000 an acre, and that is purely a nominal valuation. Very little of it is changing hands. Raising high-grade crops such as Blue Lake beans, that land has been known to amortize itself in 3 years, which would bring the probable valuation to much higher than the one I just mentioned. That is the land we are losing. That is the land that the old McKenzie is carrying off into the Pacific Ocean.

It is not only the loss of the land to the landowner that is involved. It is the loss of all the crops that that land is going to raise within the foreseeable future of civilization. That runs into lots of money.

There is another point I would like to mention. I am going to pass out some pictures for you gentlemen to look at in just a minute, but there is still the area in here that even 7 or 8 years ago was largely a matter of bombs and orchards and high-grade cropland. But Eugene and Springfield are both growing. We have within a radius of 5 miles of the courthouse in Eugene a population of some sixty to seventy thousand people. Our population nearly doubled in Eugene between the 1940 and the 1950 census. This is not chamber of commerce data. It is supported by the census figures.

That means that this town is growing, and it is growing this way, with the result that on that delta we have hundreds of homes today, many of them ranging in value from $20,000 to $50,000. That was not so bad when we had no control on either river there and they offset each other. When I was a kid in the woods of northern Michigan we made our own amusements. We put a board across a sawhorse and it made a dandy teeterboard. It worked pretty well until one of the kids decided to get off, and then the boy on the other end took a horrible bump. That is what we are afraid of.

The bed of this McKenzie is already several feet higher than the Willamette. When we control that and lower the level of the water some more then the next time we get a flood out of the McKenzie that thing will cut across.

We have a number of problems there. Of course, one is the probability of the destruction of not only a lot of highly valuable property, but the possible loss of human life. There is an old geological channel running across here. That may cut right through the main street of Springfield, a city of some 10,000 or 12,000. I am not predicting that, but it has happened in the past and can happen again. We do not want to have that happen.

There is one good point that I want to mention there. That area is very new. It does not have the necessary sewage and drainage facilities that an old, established city would have. I would say that 90 percent of the area is served with septic tanks. You just let them become flooded and you have a lovely health menace there. I am afraid we would be boiling water around there for quite a long time.

There is one other very good point. We have been talking, and we will be talking in terms of our established units of feet, acres, kilowatts, dollars. But there has not been any genius yet who invented a yardstick that will measure human suffering and human misery, and there is a lot of it there. These floods have been occurring from 1 to 3 times a year. I have lived there for 27 years, and I have lived with these floods. I know what is happening, and I am certainly working hard to prevent further damage.

I am not going to discuss the power and other facilities. Basically, this is a flood-control project.

I am a customer of the Eugene Water and Electric Board. Within reason, I pay for my water and my electricity every month as time goes along. I might say they started out as a little outfit when their repair system consisted of 2 fellows on a bicycle with a basket and a few spare parts about 24 years ago. They have been conservatively

managed, and they are well run by a public electric board, and they are financially capable of taking care of their own obligations.

From that point I will let the electrical people carry their own ball. But as a customer and a citizen of the area I will give them that much credit.

We very sincerely need that flood control on the McKenzie River. Without it, our problem is multiplied very many times. Therefore, I respectfully request your committee to enact the necessary authorization and appropriate the planning money and legislation necessary in order to make this work.

Mr. MACK. Thank you very much. Are there any questions?

Mr. ANGELL. Dr. Oberg, this project is not on the main stem of the McKenzie River, is it?

Dr. OBERG. This project is way up here. It is about 40 miles up.

Mr. ANGELL. It is on Cougar Creek at its juncture with the McKenzie.

Dr. OBERG. It is on the South Fork of the McKenzie River, just above the point where Cougar Creek comes in.

Mr. ANGELL. What provision is there for controlling the floods on the McKenzie proper above that point?

Dr. OBERG. It is an interesting point because that other creek running up here, we call it the upper McKenzie, as a distinction from the South Fork—there is no immediate flood problem there except that the Eugene Water and Electric Board is planning some power installations there, as well, which is entirely their own understaking, and which will have some value as a flood-control measure. But Old Man Nature steps in there. This area up here is all pretty much hard-rock foundation. The upper McKenzie is porous largely, with the result that the upper McKenzie area is able to absorb the water very readily, and our real floods come from over in here.

Mr. ANGELL. So the main hazards and floods come from this area?

Dr. OBERG. From the South Fork of the McKenzie. With the addition of proper dams here——

Mr. ANGELL. Dr. Oberg, in your opinion what would be the percentage of flood hazard or damage that will be taken care of by this dam?

Dr. OBERG. Approximately 50 percent—approximately 50 to 55 percent.

Mr. ANGELL. That is all.

Mr. MACK. Dr. Neal.

Mr. NEAL. Do you think you can reduce the flood by impounding your water at the Cougar Dam at the point where you designate your two cities of Eugene and Springfield are, by at least 50 percent?

Dr. OBERG. Yes, sir.

Mr. NEAL. What, may I ask, is the storage capacity of the Cougar Dam?

Dr. OBERG. I will have to ask our technical experts about that problem. The Colonel will be able to handle that.

Colonel WHIPPLE. 155,000 acre-feet for flood control.

Mr. NEAL. Colonel, in connection with that, how much extra storage is there? You carry that dam for power purposes at practically a uniform level all the time except during flood seasons, when you have a great deal of need for extra storage there.

Colonel WHIPPLE. Yes, sir.

Mr. NEAL. In addition to the normal storage that would be required for the production of power, how much more storage can you take care of in a flooded season of the year by this dam?

Colonel WHIPPLE. The total of 155,000 acre-feet is the maximum flood-control storage that would be in the project.

Mr. NEAL. How much?

Colonel WHIPPLE. 155,000 acre-feet.

Mr. NEAL. That would be the total capacity?

Colonel WHIPPLE. No, sir! 231,000 acre-feet is the total capacity.

Mr. NEAL. I see. Around 80,000 or 90,000 acre-feet in addition to that which is normally required for power, Colonel?

Colonel WHIPPLE. No, sir. The 155,000 acre-feet is reserved for flood control over and above the power storage at flood-producing seasons of the year. It is only during the summer that most of that storage is available for power and water conservation purposes.

Mr. NEAL. May I ask the Doctor another question here? What is the average depth of the flood you get, let us say, in Eugene? What would be the average depth, let us say, on the main streets of Eugene? What would be the depth of the floods?

Dr. OBERG. Thank God we have not been measuring it on the main streets. We have kept it off the main drag. But we have a place known as the Ferry Street Bridge where the line crosses, where our river measurements are taken. The normal flood stage there is 12 feet. That is the point above which flooding begins to occur. Our floods have run as high as—in extreme flood periods—as high as 22 feet. Those top 10 feet are the ones that get you in trouble.

Last November the flood—and it was not a big one at that—we have this Lookout Point Dam at Meridian Creek, and we have two dams farther down on the South Fork already complete. We are able to cut down the flood at Eugene at the Ferry Street Bridge by 6½ feet. That was all that was necessary. We cut it down from an estimated 3 feet to 3½ feet above that stage, to the same amount below. We might be able to cut it down more, but it was not necessary to do it. Plus the fact that the Lookout Point Dam is not yet completed and not entirely able to operate at full capacity. But our problem there is that we are right in there. Sixteen miles north is the McKenzie and when it comes in it is just scouring out that land north of that junction point. It takes a lot of the land out of agricultural use.

I was at a meeting 2 months ago at Junction City, where they were talking about a little reclamation project from one of the other dams which has nothing to do with this dam. Several times during that hearing the farmers got up and interjected into the hearing what was otherwise irrelevant as far as the purposes of the meeting were concerned, as to how much land they were losing just now from the scouring of the McKenzie Fork.

Mr. BUSH. Will the gentleman yield?

Mr. NEAL. Yes.

Mr. BUSH. Doctor, you say this land is being washed away through erosion from these floods. You made an earlier statement that the value of the land is placed at $1,000 an acre. It still must be pretty good land if they are demanding $1,000 an acre for it.

Dr. OBERG. It is pretty good land, but it is not much use after we get it out into the Pacific, and that is where it goes.

Mr. BUSH. But they would not give it up for less than $1,000 an acre at the present time, would they?

Dr. OBERG. No. Our local cannery there for instance plans to can 5,900 tons of Blue Lake beans alone. That is one of their major canning crops. Others are corn, and carrots, and beets.

Mr. BUSH. Mostly vegetables.

Dr. OBERG. They are very high-grade crops. We live on the other side of the Rocky Mountains. If we are going to compete with garden crops from the east side of the Rockies we have to compete on a quality basis. If we are going to meet the freight differential we have to produce something that is a little better than what they produce somewhere else, and that is what we are doing here.

Mr. BUSH. What is your industry? What type of industry do you have?

Dr. OBERG. Basically our industry is lumber. They have cut out a good deal of the lumber in Washington along Puget Cound and the Columbia River Valley and have moved down into the Willamette and other areas. Our counties of Lane and Douglas to the south, therefore, have the two largest remaining stands of Douglas-fir in the United States. But there are lots of people there and we do not want to be a one-industry country. We have to develop our agriculture. We have to hang on to it. If we do not we are in trouble.

Mr. BUSH. You are more concerned then with your agricultural problem than your industry there. Your damage is greater in that?

Dr. OBERG. I would not quite put it that way, Mr. Bush. I would put it this way: We are doing a lot of reforestation and a lot of tree farming out there. The larger lumbering outfits are figuring on reharvesting the crop every 75 years. It is a long ways away, but it is a whole lot better than the slash logging that they did in Michigan when I was a kid there, and they cut the logs off and left stumps 5 to 10 feet high.

Basically we can reforest a logged-off area, but who could put back all of that stuff? When you have a gravel bed there instead of that wonderful land, you just have a gravel bed, and that is all it is ever going to be.

Mr. BUSH. You are certainly correct.

Mr. MACK. Mr. Small has a question.

Mr. SMALL. Upstream where this proposed dam would go, Doctor, what is the nature of the land in that area that will be flooded?

Dr. OBERG. The land that will be inundated by the reservoir?

Mr. SMALL. Yes, sir.

Dr. OBERG. It is chiefly a mountain canyon quite heavily timbered. As in the case of the control on the Willamette, that timber is salvaged and sold, and there is no agricultural land in that area whatever.

Mr. SMALL. But you could not reforest that ground after it is inundated by this reservoir, could you?

Dr. OBERG. Yes, sir.

Mr. SMALL. So you lose that much forest ground.

Dr. OBERG. We do. Yes, sir. But we are saving so much farther down.

There is one other point on the McKenzie that I want to bring up while I am at it. They have been cutting a lot of timber up here, and a lot of that watershed is being more or less denuded, with the result that one of these fast floods comes down just that much faster.

With the same amount of rainfall and the same horrible conditions it will produce about 9 inches more of flood in the same period of time. It comes down that much quicker.

Those pictures I am passing around were taken some 8 to 10 years ago. A lot of the area that you see in those pictures has houses on it now. It is hard to believe. I drive out there and I find a new subdivision there every time I go out there, with people living there.

Are there any further questions?

Mr. NEAL. On the eastern watershed is your rainfall fairly regular each year and fairly constant? Is it 40 inches of rainfall?

Dr. OBERG. We run about 39 inches in our valley. In the mountains it is very much higher.

Mr. NEAL. The biggest part of it comes during the 4 months you mentioned?

Dr. OBERG. Yes, sir.

Mr. NEAL. Is there a great deal of variation in the flood level from year to year down at Eugene?

Dr. OBERG. Yes, sir.

Mr. NEAL. There is?

Dr. OBERG. Some years we will have very modest floods. The one in November was the only one we had, and even without any control it would not have been considered a very serious flood. In other years it runs up to about 20 to 22 feet at the Ferry Street Bridge, and we are in trouble. We have from 1 to 3 threats like that every year.

Mr. NEAL. How often would you estimate you get a flood like we see in the picture?

Dr. OBERG. About every 3 years.

Mr. NEAL. Thank you.

Mr. BUSH. I have one more question.

Mr. MACK. Mr. Bush.

Mr. BUSH. How many acres of land are covered by water through these floods?

Dr. OBERG. There again you get me into an area I would prefer not to speak on.

Mr. BUSH. I wonder how extensively it goes out over your farmland.

Dr. OBERG. It depends, of course, on the degree of flooding. We probably have an extent of 8 or 10 miles. If we have a bad flood such as the one of 1861, which was the last granddaddy flood we have had in that part of the country, you could row a boat for a distance of 20 miles across the river, and that is mostly farmland. That is what we don't want to happen.

Mr. STAUFFER. Mr. Chairman.

Mr. MACK. Mr. Stauffer.

Mr STAUFFER. I came in late and I apologize.

Is there any electrical development in this dam?

Dr. OBERG. Yes.

Mr. STAUFFER. Are we contemplating power?

Dr. OBERG. Yes. We contemplate a partnership between our local municipal utility and the Federal Government whereby the Federal Government builds the flood portions and the local utilities build the electrical portions. Your question will be very fully answered by representatives of that utility, and I would rather not carry it into that territory.

Mr. STAUFFER. Is there any navigation?

Dr. OBERG. No. Navigation does not come up as far as this. In the early pioneer days boats got up as far as Springfield, but with the coming of the railroads and proper highways navigation as such no longer exists.

Mr. NEAL. One more question, Doctor. Is the current over the whole flooded area pretty swift? Is there any opportunity for deposits?

Dr. OBERG. No, you do not have time for any silting up. The physicists tell us when you double the velocity of a stream you multiply its carrying power by 64 times to the fifth power. I am frank in telling you that none of that water has any time to silt out while the river is really at flood. By the time it gets to silting up then it is much farther downstream than our area. Whatever dirt there is in it we have lost.

By the way, that matter of fall might be of interest to you gentlemen. Our elevation at Eugene is about 400 feet above sea level. At Portland where the Willamette runs into the Columbia it is 22 feet. The fall there is only a little over 300 feet in a distance of 115 miles. That is not uniform. In our area in the upper valley the fall runs about 6 feet to the mile. Farther up, within about 25 miles of Portland, that fall has been reduced about 6 inches to the mile. The river is not silting up. At our place the velocity is too great.

Mr. MACK. Thank you very much, Dr. Oberg, for your statement.

The Chair would like to make this observation for the benefit of some of the members who found it impossible to be here for every word of the testimony. The flood control involved in this particular project has already been authorized by the Congress of the United States. It has been approved by this committee and by the House and Senate, and signed by the President. It involves an expenditure of $27 million.

The main question before the committee is whether we shall permit the city of Eugene to install hydroelectric capacity in this reservoir or dam which the Federal Government already has authorized. If Eugene goes ahead and installs the power in this dam, then Eugene will spend about $10 million.

Also, according to the testimony of the Army engineers, the city of Eugene will pay about $500,000 toward the flood-control feature of this project.

So according to the testimony of the Army engineers the Government, in obtaining this flood control which has already been authorized, will save about $500,000, providing this legislation is enacted, in giving the city of Engene, a municipal utility, the right to install hydroelectric capacity in this dam.

Mr. ANGELL. It is true also, is it not, that the original authorization for flood control in this project did not include hydroelectric development.

Mr. MACK. That is correct.

Mr. ANGELL. It was not contemplated then, and that is the reason why this authorization is necessary now.

Mr. MACK. That is correct.

Mr. ANGELL. And it is also true, is it not, that all additional expense for the construction of electric power generation will be borne by the city of Eugene?

Mr. MACK. That is correct.

Mr. ANGELL. The testimony this morning was that it will also save the Federal Government some $500,000 in addition as a direct contribution by Eugene for dam construction.

Mr. MACK. And bring about the generation of 10,000 kilovolts of electricity at the site more than the Federal Government would install if it built the dam.

Mr. NEAL. As an entire flood-control project, as it was originally authorized, the Government would bear the total expense and there would be none recoverable?

Mr. MACK. That is correct.

Mr. NEAL. Under this bill the building of the dam and installation for power is borne by the city of Eugene, but they themselves amortize it after their own fashion. There is nothing returned there to the Government. But as we understand it, half a million dollars would be reduced from what would have been the original cost to the Government, by permitting the city of Eugene to build this power installation.

Mr. MACK. That is correct. The Government, according to the testimony of the Army engineers, will save $500,000, and the people of the area will also secure 10,000 additional kilowatts of electricity at the dam site.

Mr. NEAL. At their own expense.

Mr. MACK. Correct.

Mr. Ellsworth, have you a statement or another witness to introduce?

Mr. ELLSWORTH. Yes, Mr. Chairman and members of the committee. There has come from Portland, Oreg., Mr. Carvel Linden, who is president of the Pacific Northwest Trade Association, an organization in the States of the Pacific Northwest. Mr. Linden has another appointment so I would like to have him appear before the committee at this time.

Mr. MACK. The committee will be pleased to hear from Mr. Linden.

Mr. ANGELL. Mr. Chairman, before Mr. Linden gives his testimony, may I say that Mr. Linden comes from my congressional district and I have known him for many years. He has been very active in public affairs and has been the head of the chamber of commerce and various other public institutions. He is one of our outstanding citizens.

I, as a member of this committee, am very happy to introduce you, Mr. Linden, to the other members of the committee and welcome you before us.

Mr. MACK. Mr. Linden, you may read your statement, or summarize it, and later insert it in the record, whichever you wish.

STATEMENT OF CARVEL LINDEN, PRESIDENT OF THE PACIFIC NORTHWEST TRADE ASSOCIATION

Mr. LINDEN. Thank you, sir.

Mr. Chairman and gentlemen, my name is Carvel Linden. My business connection is vice president of the United States National Bank of Portland, Oreg. I am chairman of the board of the Portland Chamber of Commerce, and recently elected president of the Pacific Northwest Trade Association, a federation of chambers of commerce, boards of trade, and industrial and other business enterprises in the region of Oregon, Washington, Idaho, western Montana, British Columbia, and Alaska.

I wish to express the vital interest of the business people of the Pacific Northwest in your approval of the proposed partnership in Cougar Dam in Oregon, which is now before you; also endorsement of a partnership plan generally as an additional method whereby the power needs of this region can be met.

Most notable of the natural resources of the Pacific Northwest is the greatest hydroelectric power potential in the Nation. Hydroelectric power is the only present natural fuel of this region and we suffer from a shortage of all forms of power. We have no coal, oil, or natural gas. If we are to serve the demands of one of the most rapidly growing areas in the Nation and make our contribution to the economy of this Nation, it is vital that we continue to harness the greatest potential hydropower-producing stream in our country, the mighty Columbia.

For the past two decades the primary source of electric energy in the area has been from the great multiple-purpose projects financed and constructed by the Federal Government. We of the Pacific Northwest are proud of the fact that the costs of power of these great projects are being paid back to the Federal Government with interest, and that the payments are now substantially ahead of schedule.

We are able to say also that the use of this power for the most part has been for new industry for the Nation and not industry that has moved from other sections of the country to our region. We are grateful for the wisdom and vision of Congress, which has led them to provide funds for harnessing the great water resources of the Pacific Northwest. You have devoted a substantial proportion of the water resources development budget to this multiple-purpose development in the Pacific Northwest.

In the past 4 fiscal years appropriations under the civil-works functions for multiple-purpose water resource development amounted to $350 million. In addition, other substantial appropriations have been made to the Department of the Interior for work of the Bureau of Reclamation; however, even these large sums have been insufficient to provide adequate power to meet the energy needs of the area.

In the winter of 1952–53 we experienced brownouts and temporary shutdowns of some of our large industries; also curtailment of the energy consumption of both commercial and home users of electricity. During the current year we had better than average water conditions, and no such curtailment has been necessary.

We find that the desire of business to create additional new industry in the Northwest is limited by the inability of the present electrical system of the region to provide the necessary energy for their operation.

The Pacific Northwest cannot take no for an answer in this further development. It must find some means of providing sufficient electric power to meet the needs of the area. This need is emphasized by a reference to the past growth of the installed electric capacity, which was about 800,000 kilowatts in 1940—and 11 years later, in 1951, this has increased over 4 times to 3,405,000 kilowatts.

The estimate of need by 1962 is 10,578,000 kilowatts. Since 1940 the population of the region has increased about 33 percent, compared to a national average of 14 percent.

The utilities of the region, including State, private, and Federal, are in agreement that future requirements will steadily increase at a rate

of about 6 percent per annum. As you know, 6 percent per annum compounded will double an amount in 12 years. On this basis, the requirement for water-resource development will amount to an annual rate of $200 million by 1965 for power investment alone.

This indicates the current expenditures must be stepped up if this demand is to be met. These capital requirements for constructing hydrogenerating capacity may be somewhat startling to those who come from regions where power is generated directly from fuel.

I would remind you that the low cost of hydroelectric power comes not in the initial investment, but in the continuing operating costs, since there is no fuel involved, and falling water does the work. The investment per kilowatt of installed capacity of hydroelectric power is generally 2 to 3 times the corresponding investment required to produce electric power from fuel. Thus, our region finds the need for making capital investment 2 to 3 times as much as that required by most other regions in order to meet their normal growth in the consumption of electric power.

The problem of obtaining funds to meet these large initial costs is emphasized by mentioning that all told the Federal Government up to 1952 had invested in excess of $1 billion in the Columbia River Basin area. The expenditure by 1963 is expected to exceed $3 billion. Hence, it is imperative that all sources of financing be utilized, including private, State, and Federal.

In seeking ways to supply the energy requirement of the Pacific Northwest we are fully mindful of the necessity of not squandering the great resources with which our region has been blessed. This applies not only to the hydroelectric potential, but also to the irrigation potential, our huge stands of forests and our fisheries. We cannot afford to drop all of these considerations and engage in a quick and easy scramble for hydroelectric power at the cost of other water resources values. The multiple purpose development of water resources of the Pacific Northwest must be continued with a sober respect for the rights of posterity; also for the value of each dollar invested, whether it be from private investor capital or from the general tax revenues.

Our area has been favored during the past several years by visits by members of this and other committees of Congress who have inspected our multiple-purpose water resources projects. While we have found a uniform admiration for the engineering accomplishments and for the tremendous potential for economic good which these projects represent, we also find among Congressmen from both parties a strong feeling that further development of the water resources in the Northwest cannot be financed from Federal appropriations solely. This viewpoint is further indicated through careful reading of questions asked and statements made by Members of the Congress. The result is a concept of partnership, as set forth by our President, and by Secretary McKay, former Governor of Oregon.

The Pacific Northwest Trade Association in its meeting at Portland, Oreg., on April 13, passed a resolution authorizing and directing me as its president to speak our support of the concept of partnership. The Portland Chamber of Commerce similarly endorses this concept. As we understand partnership, it represents a joint activity by the Federal Government and local agencies to develop the water resources of the region, with a sharing not only of the cost and respon-

sibility for that development, but also with the sharing of authority over the development. For over a century and a quarter the nationwide development of navigable waterways has been predominantly a responsibility of the Federal Government, and for over a quarter of a century, the Federal Government has accepted the responsibility for a major role in flood control throughout the Nation.

In hydroelectric power development, however, the role of the Federal Government has been less clear, and in only the Tennessee Valley and the Columbia Valley has the Federal Government carried its activities to the point of becoming the major producer and wholesaler of electric power.

It appears, therefore, that the field of power development is the one in which our region is faced with the major new obligations and responsibilities of partnership, which will require major changes in our former methods of thinking, planning, and financing to meet our power needs. By my contacts not only as president of the Pacific Northwest Trade Association, but also through my personal contacts with many financial, business, industrial, and utility executives of the Pacific Northwest, I say with confidence that we accept that challenge. We will be a cheerful, eager partner of the Federal Government, and we will ask your indulgence and assistance if a changeover from the old to the new method of thought, operation, and financing involves some confusion.

We particularly need strong support and assistance from the Federal Government to enable us to assure the potential investors of private capital that the Federal Government cannot legally at some future date, through sudden shift of policy, destroy the value of their investment. Only with such an air of confidence can money be obtained from private investor sources, at reasonable interest rates.

When I speak of private capital, please do not interpret that as taking sides on the question of publicly owner power. Whether the money used for power development is borrowed by a public utility district or a private corporation, it still ultimately has to come from a private investor. He is the judge of what terms are acceptable to him as a basis for risking his capital.

The bill before you to authorize power at Cougar Dam under a partnership arrangement between the Eugene Water Board and the Federal Government has our wholehearted support. The amount of power developed is not great as compared with some of the tremendous powerplants on the Columbia River. It is, however, greater than hundreds of hydroelectric plants in other parts of the country. It will provide a worthwhile addition to the power resources of the Pacific Northwest and at the same time will help us to meet a small portion of the cost of a flood-control project which was originally authorized by Congress on the merits of the flood control afforded alone. As already explained to you by others, Cougar Dam is an essential part of the plan for the control of floods which have scourged the most productive valley in Oregon. To the fathers and grandfathers of many of us who crossed the plains in covered wagons, the Willamette Valley was the Oregon of which they had heard, and which they sought. It was truly a promised land, but it still requires the control of the frequent and extensive floods and the storage of water for irrigation during the dry summer growing season in order to realize its full potential.

At this juncture may I mention another bill which is pending also before you and which I should like to urge you to consider at an early date. I refer to the Green Peter project on the Middle Santiam, which is also a tributary of the Willamette River. This bill is a counterpart of the Cougar Dam legislation, except that the partnership feature is an open end in that it permits either private or municipal participation in the project. There is every indication that a private company is interested in developing this part of the power on Green Peter. This project is also urgently needed because of the flood conditions that exist on the South Santiam.

Completion of the Willamette River Basin project will reduce about 30 percent the per annum damage by flood. Reservoirs also under construction, when completed, will reduce the damage another 12 percent. Construction of Cougar Dam will further reduce the damage by 3 percent; hence, we can ultimately be relieved of 45 percent of the present annual flood damage, which presently approximate $37,700,000. Those are United States Army Corps of Engineers figures.

The plan before you removes from the costs of the Federal taxpayer all costs attributed to power and a small portion of those costs attributable to flood control. The plan makes unnecessary additional appropriations by the Federal Government for power development and for construction and operation of distribution lines for the power generated and gives to the local community the right and obligation to develop the resources of its own area. It also provides for the needs of irrigation, and is truly a multiple-purpose project which sacrifices none of the benefits of multiple-purpose development.

The proportions of Federal investment and local investment are significant only when studied in the light of the benefits involved. The division of costs as between local people and the Federal Government has been made strictly in accordance with the separable-costs-remaining-benefits method which has been approved by the Department of the Interior, Department of the Army, and the Federal Power Commission as the most generally acceptable method of allocating costs. Of course, if the benefits from the dam were primarily power, as is the case in Bonneville and McNary Dams, the proportion of costs allocable to power would be entirely different.

We believe this partnership proposal is one of the kind that you have been looking for, and it is one which the great majority of the people of the Northwest can accept as a guide to further action to accept the challenge of partnership as presented by our President and this administration. We ask your favorable consideration.

Mr. MACK. Mr. Linden, as president of the Pacific Northwest Trade Association, you are obviously quite familiar with the thinking of the business people of the Pacific Northwest. Do you know of any opposition among business people to this proposed partnership arrangement under which the city of Eugene would be provided an opportunity to build Cougar Dam?

Mr. LINDEN. I have heard of none, sir. I do not believe any exists.

Mr. MACK. Do you know of any opposition from any groups in the States of Oregon or Washington who are opposed to this legislation?

Mr. LINDEN. I am not aware of any opposition.

Mr. MACK. The President of the United States endorses this project; the Governor of Oregon favors it; the Bureau of the Budget recommends it; the Army engineers recommend it; the Federal Power Commission recommends it; the Grange is for it; the public power people are for it and the private power people are for it. It does not seem from the testimony the committee has received that there is any opposition to this proposed legislation.

Mr. Angell, have you any questions?

Mr. ANGELL. Mr. Linden, I understand this is one of the first projects that has come up for consideration by the Federal Government of this so-called partnership arrangement between local interests and the Federal Government in the development of hydroelectric power on the major navigable streams of the United States. That is true, is it not?

Mr. LINDEN. Yes, sir.

Mr. MACK. Will the gentleman yield?

Mr. ANGELL. Yes.

Mr. MACK. There are two projects. The Priest Rapids project, which is under consideration, and the Cougar Dam project. Both are somewhat similar in character and purpose.

Mr. ANGELL. That is true, but it has not reached the stage of this one. Both of them are pending before our committee at the present time.

Mr. MACK. That is right.

Mr. ANGELL. And some hearings have been held on the Priest Rapids project. That is, however, a project sought to be developed by a publicity utility district in the State of Washington.

As I understand from your answer to questions propounded by our chairman, the general consensus of opinion in the Pacific Northwest is very favorable to this type of partnership arrangement in the development of hydroelectric power?

Mr. LINDEN. I would say that is true.

Mr. ANGELL. Is it not generally considered, particularly in our area of the Pacific Northwest, that unless we continue to make new starts in the production of hydroelectric power, very shortly, if not immediately, we are going to be out of power for general use in that area after 1960?

Mr. LINDEN. I think it is safe to say we need to use all facilities that we can possibly get together to increase our power production at the predicted rate of growth. We will need not only partnership dams, but we will need Federal dams, and we will need public utility dams, and we will need to obtain power from every possible source we can get it from. This is just one additional method of providing money to obtain that power.

Mr. ANGELL. The information that has come before this committee in previous hearings is that it requires over 500,000 additional kilowatts a year to meet the growing demands of the Pacific Northwest for power.

Mr. LINDEN. That is correct.

Mr. ANGELL. That is approximately the production capacity of the Bonneville Dam. While we have a number of new projects underway, such as McNary, The Dalles, and Chief Joseph, even with those completed and with the power on the lines it is our understanding from the information that has come before the committee that early

in the 1960's we will be without sufficient power to meet our demands unless some additional projects are initiated.

Is that true, according to your information?

Mr. LINDEN. That is correct.

Mr. ANGELL. As I understand it, that gives considerable support to this proposal which I understand has the approval of the President and the administration, that local interests so far as possible be given the opportunity to participate in the production of hydroelectric power on navigable streams under the control of the Federal Government; and this is a project of that type.

Mr. LINDEN. Yes, sir.

Mr. ANGELL. Thank you, Mr. Linden.

Mr. NEAL. Mr. Linden, we recognize the fact that since you have no coal or other fuel out there, that the only source of power you really have at the present time is water.

Mr. LINDEN. That is right.

Mr. NEAL. There is one question I have: This project is primarily a flood-control project insofar as the United States Government is concerned. I notice in your statement you say the completion of the Willamette River Basin project will reduce your flood stage about 30 percent.

May I ask how many projects are contemplated in this complete Willamette River Basin for flood-control purposes?

Mr. LINDEN. I cannot answer that factually.

Mr. NEAL. Perhaps Colonel Whipple can.

Colonel WHIPPLE. I believe that there are 15 reservoirs authorized for flood control and other purposes in the Willamette Basin.

Mr. NEAL. But how many of those are already constructed?

Colonel WHIPPLE. There are five.

Mr. NEAL. Completed?

Colonel WHIPPLE. Five already completed, or substantially completed.

Mr. NEAL. How many in progress? Are there any in progress at all?

Colonel WHIPPLE. None that are in progress at this time except the Lookout Point project, which is almost complete.

Mr. NEAL. With the completion of those then you get a total of 30 percent? You figure the completion of this dam gives you only about 3 percent additional flood protection?

Colonel WHIPPLE. For the entire Willamette Basin that is correct. Of course, for the Willamette River it is the largest one of the three projects we had in mind for the McKenzie River.

Mr. NEAL. Before you can get complete flood control to the point you estimate of 50 percent you will have to complete all of these various 15 projects in the Willamette River Basin?

Colonel WHIPPLE. I am not sure about the 50 percent. I was under the impression these 15 projects would——

Mr. NEAL. It would be 49 percent, according to this statement here.

Colonel WHIPPLE. Yes, sir. I do not want to differ with the statement, but I do not want to agree with it either, because I do not recall that percentage.

Mr. NEAL. Thank you.

Mr. MACK. Mr. Scudder.

Mr. SCUDDER. The statement of the gentleman is very clear and I have no questions.

Mr. MACK. Mr. Stauffer.

Mr. STAUFFER. Mr. Linden, what is the reason for the tremendous industrial development of this Pacific Northwest that it requires this great additional amount of power from year to year?

Mr. LINDEN. Basically, of course, it is the increase in the aluminum production in the United States.

Mr. STAUFFER. Which was due to cheap power.

Mr. LINDEN. It aided the manufacture in the production of aluminum through cheap power.

Mr. STAUFFER. Yes. Aluminum you know is only produced where there is cheap power.

Mr. LINDEN. That is correct.

Mr. STAUFFER. And apparently the power in the Columbia River in the whole area out there is available at a very reasonable price, due to the contribution of the Federal Government toward the development of this power. Where is Federal Power going to stop? The Federal Government is pouring money into the Pacific Northwest and taking it from other sections of the country that need it too. I mean, we cannot develop one section of the United States to the detriment of other sections, and that has been the policy for a number of years. We have gone down into the Tennessee Valley and developed a tremendous hydroelectric power system down there. Our industries from the East are moving down South to take advantage of that power.

I am just wondering why these power developments in the Northwest cannot be placed on a basis where they would be self-liquidating instead of coming in here year after year and asking the Federal Government to help develop the power in the Northwest.

Mr. MACK. Of course, Mr. Stauffer, that issue is not involved in this particular bill, because the Eugene Public Utility is asking permission to come in here themselves and develop the power phases and in effect is willing to pay the Federal Government for the right to do so.

Mr. STAUFFER. I asked a general question there, Mr. Chairman. I felt Mr. Linden was in a position to answer it. It applies not only to this project, but to others that have come before this committee.

Mr. LINDEN. I will be glad to answer your question. In this statement I believe you will see that the statement is made that these are self-liquidating projects. We have never asked for a dam in the Pacific Northwest that was not on a self-liquidating basis, and which would pay back to the Government every dollar of the original investment, plus interest.

Mr. STAUFFER. At what rate?

Mr. LINDEN. Two and one-half percent.

Mr. STAUFFER. Is that a fair rate of interest? You are a banker.

Mr. LINDEN. I would say it is a fair rate.

Mr. STAUFFER. The Government cannot borrow money at that rate. That is, on long-term basis.

Mr. LINDEN. They are borrowing many, many billions of dollars at less than that rate, of course.

Mr. STAUFFER. Only short-term. These dams are being liquidated over a period of 40 to 50 years.

Mr. LINDEN. The bulk of the Federal debt is short-term money, however.

Mr. STAUFFER. But that cannot continue. We will have to get some long-term money one of these days.

Mr. LINDEN. My point is the return from these dams in the sale of power is returning to the Federal Government the original investment, and furthermore the amortization is ahead of schedule.

Mr. STAUFFER. I have just one more question. Are they not returning to the Federal Government just that part of the cost of these dams which is chargeable to the development of electric power? In other words, these dams are not returning to the Federal Government the part allocated to navigation or flood control. So really you are getting a big break if the Federal Government pays a large part of the cost and it returns to the Government the investment on the power development only at a rate of interest which is very low.

Mr. ANGELL. If the gentleman will yield. On the McNary project, one of the largest projects on the Columbia River, now nearing completion, approximately 90 percent of the cost is allocated to power. Thus a large proportion of the cost is allocated to power, and a small proportion for navigation.

Mr. STAUFFER. I have no objection to this particular project since navigation is not in it. I do object to the Federal Government paying any part of a development of this kind for navigation purposes on a river that never has been navigable except by small boats.

Mr. MACK. Are there any further questions?

(No response.)

Mr. MACK. Thank you very much, Mr. Linden, for your testimony.

Colonel WHIPPLE. Mr. Chairman, there was a question asked by Mr. Neal that I would like to respond to now.

Mr. MACK. The committee will be glad to have it.

Colonel WHIPPLE. That is the degree of protection to be afforded by the currently contemplated comprehensive plan on the Willamette Basin. Those reservoirs are designed to eliminate 88 percent of the flood damage in the Willamette Basin, and not 50 percent, as was previously given. They will protect 230,000 acres of land that is currently subject to flood.

Mr. MACK. Colonel, do any of these reservoirs which have not yet been started, involve hydroelectric power?

Colonel WHIPPLE. The majority of them do not. The Green Peter project, of course, involves hydroelectric power. The Hills Creek project involves hydroelectric power. On the other hand, the Blue River and 3 or 4 other smaller flood-control projects are for that purpose alone.

Mr. MACK. Thank you, Colonel.

Congressman Ellsworth.

Mr. ELLSWORTH. Mr. Chairman, at this point I would like to tell the committee that the Governor of Oregon, Mr. Paul L. Patterson, came up to the committee room this morning at 11:30 after the committee was forced to recess due to the quorum call in the House. Governor Patterson wished to make a statement favoring this bill. He is presenting such a statement and I would like to request permission that his statement which would have been inserted orally, be inserted in the record as soon as it is given to us.

Mr. MACK. Permission for the insertion of the statement of Governor Patterson of Oregon is granted.

(The statement of Governor Patterson is as follows:)

REMARKS OF HON. PAUL L. PATTERSON, GOVERNOR OF THE STATE OF OREGON

Gentlemen of the Subcommittee on Flood Control of the House Public Works Committee, I am happy to submit a statement before your body in support of House bill 7815, although I regret my inability to personally appear before you. This is caused by the necessity of my being present at the governors' conference.

My interest in this resolution is twofold: First, because it is a very material benefit to a portion of the State from both the flood-control and power standpoints; second, because it is a step in the fulfillment of the program of the four Northwest governors cooperating with the administration in the carrying forward of the announced partnership program.

At this point I would like to ask permission to introduce as an exhibit an address given by the Honorable Governor Jordan, of Idaho, before the Pacific Northwest Trade Association, April 12, 1954. Governor Jordan is chairman of the Northwest governors' power committee, and while these remarks are his own they represent his thinking, and to a large extent the thinking of the Northwest governors on the question of the development of the power capabilities of the States.

Turning now to the bill which you currently are considering, I wish to emphasize two points: First, the consideration of flood control. The McKenzie River is one of the most rapidly flowing streams in the Willamette Basin. During periods of high moisture in our area, or in periods of rapid melting of snow in the watershed, the waters of the river develop considerable velocity above the point of confluence of the McKenzie and Willamette Rivers. Completion of the Lookout Point Dam on the Willamette River above Springfield, Oreg., has greatly increased the effective flood control of the Willamette River, but the nature of the geography of the area makes it vital that something be done about flood control on the McKenzie. The Willamette River, because it is controlled and because of the natural topography of the area, has a considerably lower water level than the McKenzie near the confluence of the two rivers. This has resulted in a condition which causes serious land damage in the heavily cultivated delta area between the rivers. The construction of Cougar Dam on the McKenzie River's South Fork will go a long way toward correcting this condition.

This dam was originally conceived by the Corps of Engineers as a purely flood-control project. It has only been recently that power aspect has been added. The addition of power to the project will not cause the benefits of flood control to be lessened, but will, in fact, increase the flood-control capabilities of the dam in some cases. The flood-control capacity of the dam is 155,000 acre-feet. Officers of the Corps of Engineers advise us that that will be adequate flood control for the South Fork of the McKenzie River. Of course, this project will also perform a vital part in the overall plan for flood-control works in the whole Willamette Basin.

My second point in the consideration of the bill before you concerns the development of power and the need for power in the Eugene area. The city of Eugene is one of the fastest growing cities in the State of Oregon. A great portion of the large Oregon lumber industry is located there and the city is also becoming a leading distribution center in the State. Because of these facts, Eugene is attracting many new industries, and as a result the demand for electric energy is growing at an extremely accelerated rate. Power for the city is provided by the Eugene Water and Electric Board, an adjunct of the city government.

In cooperation with the Corps of Engineers, the city of Eugene has done considerable work on planning for the installation of power at the Cougar Dam site. The basic design of the dam has been changed to raise the height of the dam and add thereon the power potential needed by the city and the area. Under the new design, the dam will provide 37,500 kilowatts of power, and in addition to that there will be a reregulating dam located 3 miles downstream from the high dam which will smooth the flow of the river and allow peak production of power at the Cougar site. The reregulating dam will have power facilities with a capacity of 1,500 kilowatts.

The total cost of this project will be about $37,400,000. It is proposed that the Eugene Water and Electric Board furnish $10,500,000 of this amount. Of this sum, $6 million will be for power facilities alone and $4,500,000 for the

joint facilities. Within these funds will be built the reregulating dam mentioned above.

An important but not decisive factor in consideration of construction of this dam is employment. Because it is basically a lumber-producing area, the Eugene vicinity is affected by seasonal unemployment. The jobs which will become available if this dam is built will have a tendency to alleviate the unemployment problem and will be of material benefit to the State as a whole.

In conclusion, it is my belief that this project will accomplish the things mentioned above and will also be a demonstration of the belief of the people of the State of Oregon in the partnership-power program of the administration. The Eugene Water and Electric Board was authorized and created by the people of the city of Eugene. Approximately 30 percent of the cost of this dam will be borne by the people of the city. They will maintain, operate, and retain ownership of the dam's power features and the Federal Government will own and operate the remainder of the project. Insofar as releases of water are concerned, the needs of flood control will dominate.

We in the Oregon country are anxious to cooperate with the Federal Government in its effort to maintain the production of electrical energy, within the concept of the partnership program, in order that the power demands of the region shall be met.

I earnestly request your favorable consideration of this bill.

Mr. ELLSWORTH. Gov. Len Jordan, of Idaho, wanted to appear here in person, but was unable to do so. However, he has prepared a statement favoring this legislation which he would like to have in the record.

I would like also to have the permission given to Governor Jordan, of Idaho, to have his statement incorporated in the record.

Mr. MACK. The statement of Governor Jordan will be accepted by the committee.

(The statement of Governor Jordan is as follows:)

ADDRESS BY HON. LEN JORDAN BEFORE THE PACIFIC NORTHWEST TRADE ASSOCIATION, APRIL 12, 1954

Mr. Chairman, ladies and gentlemen, I am pleased to have this opportunity to speak to you tonight because I have been impressed by the interest of the Pacific Northwest Trade Association in matters pertaining to resource development. I recall that at your last meeting in Spokane a year ago the subject of water resources occupied a considerable portion of your program. I do not presume to speak to you tonight as an expert on water-resource matters, I should only like to report to you briefly in the time permitted to me on the progress that is being made by the Pacific Northwest Governors' Power Policy Committee. This committee, as you know, was organized last fall to concern itself with some of the same problems which have been a concern of your fine organization.

If you will recall, it was on the 18th of August last year that the administration in Washington issued a power policy statement. This statement was brief, clear, general, and it was favorably received throughout the country. In a way this statement represented a new departure from the policies of previous administrations and, in order to bring the matter back to your attention, I should like to repeat two paragraphs of this power policy statement and I quote:

"The primary responsibilities of the Department of the Interior are the reclamation of arid and semiarid lands under the Federal reclamation laws and the development of natural resources as authorized by Congress. These responsibilities include the disposal of surplus electric energy which can be economically produced in the course of the development of these resources. The Department of the Interior will, therefore, actively plan and recommend construction of generating facilities in hydro projects under its jurisdiction when such facilities are economically justified and feasible. The Department will particularly emphasize those multipurpose projects with hydroelectric developments which, because of size or complexity, are beyond the means of local, public, or private enterprise.

"It is recognized that the primary responsibility for supplying the power needs of an area rests with the people locally. The responsibility of the Department of the Interior is to give leadership and assistance in the conservation and in

wise utilization of natural resources. The Department does not assume that it has exclusive right or responsibility for the construction of dams or the generation, transmission, and sale of electric energy in any area, nation, or region. In general, it will not oppose the construction of facilities which local interest, either public or private, are willing and able to provide in accordance with licenses and other controls of the Federal Power Commission or other appropriate regulatory bodies and which are consonant with the best development of the natural resources of the area."

That ends the quote from the power policy statement of the Department of the Interior which, of course, was cleared with the administration. The part of this statement that impressed me was a sentence which I shall repeat again. "It is recognized that the primary responsibility for supplying the power needs of an area rests with the people locally." That statemnt impressed me because it seemed to me that the administration was saying specifically that here is your opportunity at the local level to do something toward supplying the power needs of your area. It seemed to me that there was a challenge in that power policy statement that we who live in the Northwest should accept and see if we could do something about it.

Now, on August 18 we were having one of our regular monthly meetings of the Columbia Basin Interagency Committee in Butte, Mont. I suggested at that meeting that I thought some effort should be made among those of us who were concerned with resource development here in the Northwest to implement this new administration's power policy. Because of the absence of two of the Northwest governors at that Butte meeting no action was taken, and I suggested that the matter be considered at the next regular meeting of the Columbia Basin Ineragency Committee in Portland, Oreg., a month later.

We discussed it again in Portland at that time and it was generally agreed there that this was not a proper project for the membership of the Columbia Basin Interagency Committee because it called for participation by all agencies in the Columbia Basin who were engaged in the production or distribution of energy. Now, the membership of the Columbia Basin Interagency Committee is comprised of the various Federal agencies and the States as represented by the governors. There is no place in a Columbia Basin Interagency meeting where we could bring in as equal participants those other agencies of a non-Federal nature, both public and private, who also have major responsibilities for supplying power and energy to Northwest customers. Moreover, no basin planning would be complete without participation by British Columbia and the utilities operating in the Canadian part of the Columbia Basin. Therefore, we concluded at that Portland meeting that a new organization should be formed, spearheaded by the governors of the Northwest States, and that this new organization might devote its efforts to the problem of implementing the new administration's power policy.

Following this line of thinking, the Governors of Oregon, Washington, Montana, and Idaho assembled in Olympia in November as guests of Governor Langlie and discussed procedure for setting up such a working organization.

The governors were impressed by the remarkable success which had crowned the efforts of the Northwest power pool to work together harmoniously, even though this membership represents all of the agencies engaged in the production and distribution of power, whether they be Federal or non-Federal, whether they be public or private. The success of this Northwest power pool has been so apparent that it seemed reasonable to us that we might bring to bear the same type of cooperation in a planning organization. Accordingly, we set up a meeting for Seattle, Wash., and on December 7 we assembled in Washington all of those agencies in the Pacific Northwest who are primarily engaged in the production and distribution of electric energy—this included, of course, representatives of British Columbia, in fact all utilities and agencies, both public and private, both Federal and non-Federal, who operate in the Columbia basin drainage.

The general objectives of the power policy committee are:

1. To advance and support the orderly construction of projects needed to assure a supply of power adequate to meet the power needs of the rapidly expanding economy of the Pacific Northwest—such projects to be financed by non-Federal public or by private sources insofar as possible as proposed by the administration's power policy statement.

2. To propose and support such changes in existing laws as may be required to make Federal subsidies for flood control, navigation, recreation and similar

costs available to non-Federal public and private agencies who engage in construction of new projects which are multipurpose in character. This is the essence of the so-called "partnership policy" as announced by the administration leaders.

3. To support such changes in the laws governing the payments for headwater benefits as may be required to place all owners of headwater storage on the same basis. Again this is an administration policy statement.

4. To recommend to State and Federal legislative bodies such changes in existing laws as may be required to eliminate discrimination among power customers. This should eliminate surcharges to some customers in critical water years when steam must be used extensively to supplement hydro.

An engineering subcommittee comprised of an engineer representative from each of the member agencies of the power policy committee has been actively engaged in preparing data on load growth, the relationship between estimated loads and existing and definite scheduled development of power resources.

A professional engineer has been employed to coordinate the work of this committee.

The next step in the work of this committee is to determine which projects have the best engineering and economic feasibility and to designate if possible the order in which project construction should proceed in order to best meet the load requirements.

I shall discuss who should build which project later, but first let us have a look at energy loads—past, present and future.

It is interesting to note that beginning in the year 1920, with a peak load generation of 634,000 kilowatts, we have progressed here in the Columbia Basin area to a peak load for the year 1953–54 of 7,143,000 kilowatts. Thus, we find that the 33 year compounded rate of load growth from the year 1920 to the present has been at the rate of 7.39 percent per year. Now, historically similar analyses for shorter periods within the past record are significant. From 1920 to 1940, the 20 years between wars covering the great boom, bust and recovery years, the compounded rate of load growth was 6.58 percent per year. And from 1940 to 1953, 13 years characterized somewhat by heavy war production and the advent of heavy metallurgical loads in the Pacific Northwest, the compounded rate of growth was 10.6 percent per year. From 1943 to 1953, the 10 years immediately past, including the decline from World War II peaks and through the Korean conflict, the compounded rate of growth was 8.28 percent year year.

Now with that historical background, we might try to predict what the load growth might be in the Pacific Northwest area for the next 10 years. After inquiring into the plans and proposals of all of the participating members, our engineering subcommittee has generally agreed that we might expect a further load growth in the next 10 years of something over 6 million kilowatts. This estimate of the load growth might be too conservative. This estimate actually is a compounded rate of estimated load increase of 6.2 percent annually and this rate of growth is quite in line with studies made by the Federal Power Commission and others for the same period.

Hydropower capacity in the Columbia River Basin and the coastal basins in Oregon, Washington, and British Columbia, have been estimated by some competent persons to reach about 49 million kilowatts when developed to its utimate capacity. This figure is stated in terms of ultimates and includes all powerplants and storage reservoirs which have been envisioned. On March 1, of this year, slightly more than 7 million kilowatts of this potential had been constructed and was in operation and projects with installed capacities of approximately 4 million kilowatts more were under construction.

Thus, it is apparent that with an estimate in 1964 of a load requirement of 13½ million kilowatts, we may expect to have a deficiency of something over 2 million kilowatts which must be provided by new projects not now in building. The growing electric power loads in the Pacific Northwest are estimated to exceed the capabilities of existing and scheduled powerplants by the year 1960. The region's power producers are, therefore, confronted with their utility responsibility to meet the growth of these loads. The power producers, together with the local, State and Federal Governments, have the further collective responsibility of providing an energy base for the continued economic growth of the region after 1964. As the power projects existing and under construction will develop only one-fourth of the region's hydropower potential, it appears superficially that there would be few obstacles to required expansion in hydropower production. However, undeveloped hydropower is a natural resource and,

like any other natural resource, its development is subject to the limitations of economic feasibility and requirements to coordinate all uses of the resources. This coordination is complex as it involves many alternative uses of land and water and a balance of local rights and needs with regional and national objectives.

Then, too, it has long been recognized by technicians, although probably not adequately publicized, that fuel-fired generation can be added economically in combination with hydrogeneration after the most economical hydropower projects are completed. To result in a competitive cost of firm energy such early fuel-fired plants would be operated only during adverse water conditions or for peaking. Thereafter, system economics would dictate the addition of a new hydrogeneration in combination with fuel-fired generation until all feasible hydro projects are built. The economics of this fuel-fired generation depend in part upon the location, availability and quality of fuel, and the savings and transmission costs that can be obtained by integrating the fuel-fired generation with available hydroelectric resources.

Thus, as we proceed with the development of the hydro resources of this great Columbia Basin we shall proceed as has been the method in the past of selecting and building those projects which have the best economic feasibility and which can be constructed with the least public resistance. In other words, this development will follow the line of always taking the best first and, as we proceed to develop more and more of the dam sites in this great river basin, the benefits-to-cost ratio will of necessity become less favorable.

Finally, determination will have to be made as to whether future hydro projects can, in fact, compete with fuel-fired generations. Probably that is beyond our special concern during this next 10-year period, but we shall always have the problem of comparing costs as between, let us say, cyclical storage and fuel-fired generation.

Adequate annual storage as close to headwater as possible is absolutely necessary to efficient river system power production. Records indicate that about half of annual runoff of the Columbia takes place in the 3 months of May, June, and July. Recorded flows at the Dalles show a variation of from a low of 40,000 cubic feet per second to a record high of nearly a million cubic feet per second. Several of the best storage sites are on the Canadian side. The Mica Creek site alone could store 10 million acre-feet of usable annual storage. In addition to at-site production, downstream benefits from such storage are substantial. We urgently need a cost and benefit allocation survey for upstream storage as an equitable basis for agreement with our Canadian neighbors. No other single accomplishment would lend greater stimulus to river basin progress than this.

I am pleased that in our Northwest Governors' Power Policy Committee we have enjoyed the active participation of Canada. Not only the Province of British Columbia but Canadian utilities as well have served with us and we profit by their service. Our interests are so closely integrated that it would be folly to plan separately. Much of the ultimate success of maximum river development will depend on how well we can integrate our planning.

The increased demand for electric power in this region is so great that it will require the combined efforts of all interested parties to meet the needs. Production can be achieved only by unity and cooperation and not by conflict.

Do you realize that if we are to have 2½ million kilowatts from new starts by 1964 it will be necessary to program at least twice that amount of production in order to have half completed by 1964? And 1964 is not the end of the road; we must go on, and on, and on with planning and production.

Have you thought about how many new projects will be required? Just to give you an idea, I have listed 20—more or less at random—with a good geographical spread and representing all of the types of sponsorship or ownership having a good probability of being started so as to be at least partly in production by 1964. Some of these could be on the line in 2 years; others cannot be completed in 10 years. They are not necessarily my choice or any one else's choice. Working downstream we have such projects as: Libby, Thompson Falls, Noxon Rapids, Priest Rapids, Brownlee, Oxbow, Hells Canyon (Low), Bruces Eddy, Penny Cliffs, John Day, Hills Creek, Beaver Marsh, Cougar, Strube, Swift, Muddy, Merwin, Yale, Upper Baker, and Brilliant.

The total nameplate rating of these 20 projects is 4,800,000 kilowatts. Some such group of projects must be started now if we are to keep up with demand,

I make this point to impress upon you that we must learn to think about more than one dam at a time.

Too much precious time is being wasted in bickering over who is to build which dams. The need is urgent enough that our concern should be, Who is willing and able to build them?

Personally, I question the sincerity of some people who continually carp about the administration's giving-away program and at the same time use every possible device to confuse, delay, and obstruct the orderly development of a river. Dams are not built by ballyhoo and propaganda and wishful thinking, but by cold cash at the dam site. We must be realistic; a project twice rejected by the Congress had better be reexamined for its economic feasibility. Otherwise we might someday find ourselves served with some silver-mounted kilowatts from a beautiful concrete and steel monument to extravagance.

And now in conclusion, we must accept the challenge of the new Federal power policy by assuming for ourselves the responsibility of meeting the power needs of this region. Do not forget the fact that our debt-ridden Federal Government with its budget still unbalanced is moving away from the dominant role in power development and, in my opinion, this move is long overdue.

Load growth trends indicate that facilities built, and being built, will require additional production of more than 2 million kilowatts in order to meet the demand by 1964.

That in order to supply this need, more than double this amount in new starts must be made.

That these new starts should consist of probably a score of projects—some large, some small—most of them, regardless of sponsorship, will be financed without Federal money or with Federal partnership participation only.

That one of the most urgent needs in basin planning is annual storage; and that equitable apportionments of storage costs and benefits must be determined at an early date.

That no comprehensive program can be developed without a genuine feeling of mutual confidence not only between the States and the respective agencies involved but between Canada and the United States, between the Province of British Columbia and the Northwest States.

That, rather than waste our energies quarreling over consumer preference and priorities, we should all give concerted action to a program of abundance in power production.

Remember this: More dams are needed than there are builders to build them. Who builds them is not so important as that somebody builds them and that the job is done in time and in conformity with a sound and comprehensive plan.

If you sincerely want to help develop the great power potential of our rivers, then get behind a program of progress. Do not be an obstructionist, for production and progress will be achieved not by conflict but by mutual confidence, by unity of purpose, and by hard work.

Mr. ELLSWORTH. Mr. Chairman and members of the committee, up to this point the discussion of this project has been on the subject of flood control and power in general. The bill, as you know, contains in it the provision that the United States Government acting through the Corps of Engineers and the Secretary of the Army may make a contract with the municipally owned electric utility operation. The head of that organization and his assistants in the Eugene Electric and Water Board are here, and I would like to present to the committee now Mr. Byron Price, the asistant to the superintendent of the Eugene Water and Electric Board, with the request that Mr. Price introduce to the committee the men who are with him in the event that you wish to refer any question to one of his technical people.

Now, Mr. Chairman, Mr. Byron Price, of the Eugene Water and Electric Board.

Mr. MACK. The Chair will be pleased to hear you, Mr. Price.

STATEMENT OF BYRON PRICE, ASSISTANT TO THE SUPERINTENDENT, ACCOMPANIED BY RAY BOALS, SUPERINTENDENT; B. K. TAYLOR, ENGINEER; AND T. B. HAYES, ENGINEER, ALL FROM THE EUGENE WATER AND ELECTRIC BOARD

Mr. PRICE. Mr. Chairman and members of the committee, first I would like to introduce Mr. Ray Boals, the superintendent of the Eugene Water and Electric Board. We also have with us two of our engineers, Mr. B. K. Taylor and Mr. T. B. Hayes.

I would like to have Mr. Hayes come up here because I am sure he will have to answer some of the questions for me.

I will take a few minutes to get you back into the local situation that we have out there.

The Eugene Water and Electric Board was organized in 1911 under the provisions of the city charter. Its purpose at that time was to take charge of the municipally owned water and electric utilities. This all came about because of a typhoid epidemic in 1906 that brought about great public indignation and led to municipal ownership of the water system.

The first electrical plant that the Eugene Water Board had was its Walterville plant, and I will attempt to point these out as we go through. The Walterville plant is located about 12 miles from Eugene on the McKenzie River. It gets its water to make this hydroelectric power out of a diversion canal that leads down through it and gains its head and drops into a tailrace and back into the river.

Mr. MACK. What is the capacity of that plant?

Mr. PRICE. The Walterville plant has a capacity of 9,000 kilowatts at the present time. That is, it has been rebuilt and enlarged to that size.

This Walterville plant was primarily built to supply or pump water for this municipal water system. In 1915, however, the water board had a little surplus power from the Walterville plant which, by the way, was at that time 1,500 kilowatts. This extra power was used for street lighting, and it picked up a few customers and found itself getting into the utility business. So in 1915 it purchased a private utility that was serving that area.

From this initial investment of about $300,000 this water board plant—I call it the water board, but, gentlemen, the Eugene Water & Electric Board is the officiel name, although we call it the water board as a short title—this water board has now grown to have a present gross value according to the last page of the financial statement in this booklet we handed you, of about $23 million.

It has a present long-term bonded indebtedness of about $2,500,000. That is principally on its water plant because of the brandnew water-filtration plant that was a substantial investment in the last few years.

Years of successful operation, of course, have gained national recognition for the Eugene Water & Electric Board as a municipal utility, and we are very proud of that.

The composition of the water board is local citizens; businessmen who are elected from the city. They are elected from the 4 wards, and 1 member at large. They serve 5-year terms and are staggered. That is just a civic leadership without compensation. Their leadership is something to be envied.

Also, another thing to be envied by many utilities, especially municipal utilities, is that it operates separate and distinct and apart from the city administration. It is, so to speak, a standing committee of the city council. They have no interrelationship except coordination in cooperative work.

After the board had the first installation it found that it kept growing as an electrical utility until 1930, when it built a plant at Leaburg. The Leaburg powerplant farther up the river about 22 miles from Eugene is the one I referred to.

Mr. MACK. What is the capacity of that plant?

Mr. PRICE. The Leaburg plant has a present installed capacity of 15 million kilowatts. It was rebuilt in 1950, which brings it to the new capacity. The Walterville plant was rebuilt in 1948 to the 9,000-kilowatt capacity.

In addition to that in 1932, 1942, and in 1950, the Eugene Water Board constructed a steam plant and added additional units to that, and at the present time it has a capacity of 32,000 kilowatts.

Mr. MACK. Does the steam plant operate or do you buy your surplus electricity?

Mr. PRICE. We have an arrangement or a contract with Bonneville in addition to our plants I just mentioned of hydro and steam. We have a contract with the Bonneville Power Administration for 5,000 kilowatts of firm power and an additional steam replacement power—which answers your question directly—to purchase that steam replacement in lieu of our steam plant.

We are, of course, required to maintain a stockpile of fuel, coal or wood chips, in order to qualify for that, but it does entitle the water board to let that steam plant idle along on spinning reserve, carrying 6,000 kilowatts more or less for reregulation, or regulation on the line, and carrying of course local fluctuation.

Mr. ANGELL. What do you pay Bonneville for that dump power?

Mr. PRICE. We pay them at the rate of 2½ mills. Not for firm power. Excuse me. That was dump power. For firm, Mr. Boals, that was about an average annual cost for Bonneville power last year of 3.3 mills, was it not?

Mr. BOALS. Yes. All kinds.

Mr. PRICE. They averaged the dump and firm and averaged out to 3.3 mills.

Mr. ANGELL. The cost of power from this proposed dam would be more than what you pay Bonneville?

Mr. PRICE. Yes. Or approximately the same for that same type of load-factor power. Because to make up that 3.3 average we have quite a little 2½-mill power, and we have some that runs as high as 5 mills. I don't know whether you figure it on a kilowatt basis or not; do you, Ray?

Mr. BOALS. No. Not very well.

Mr. PRICE. Approximately four. So that is in line with that.

Mr. NEAL. What is the source of your coal?

Mr. PRICE. Utah. There is no local coal. As has been brought out in earlier testimony, we have no coal and we have no natural gas—at the present time, anyhow. The prospects for continued pulp fuel or wood waste are fast disappearing, and the future of that is somewhat in doubt.

As Mr. Mack knows, certainly in his area they are developing uses for this wood waste to the point where is is not firm fuel for steam generation.

Mr. NEAL. At what price did you get your coal delivered?

Mr. BOALS. $11.50.

Mr. MACK. Do you use oil for the production of electricity at the steam plant?

Mr. PRICE. This steam plant has facilities for the burning of oil, but we would rather leave the oil in California.

Mr. MACK. How much installed capacity of electricity does the Eugene Water Board require to supply the needs of its customers?

Mr. PRICE. We had an all-time peak this last winter, the exact date of which was the 25th of January, and that was 58,300 kilowatts. If we add up the hydro plants' and the steam plant's full capacity we get 56,000 kilowatts. So we had to depend very definitely on the Bonneville pool for the additional capacity required for that peak.

Mr. MACK. You have 24,000 of installed capacity now, and the new project will give you 35,000 additional. In other words, with the new project you will be able just about to supply your own needs in hydroelectricity at the rate of present consumption.

Mr. PRICE. We have 56,000 now.

Mr. MACK. I was not counting the steam plant.

Mr. PRICE. That is right.

Mr. MACK. You have enough hydroelectricity.

Mr. PRICE. That is right.

Mr. MACK. To supply your present needs.

Mr. PRICE. That is right. And counting the steam capability like we like to plan and see what could happen, we feel by the time this Cougar plant could be brought on the line that the increase of the load in that area and our system will have met that same addition to our system. In other words, we are growing at such a rate that it will double our demand in 10 years.

Mr. MACK. How soon, according to your estimates, can the Cougar plant be brought on your line?

Mr. PRICE. With very favorable appropriations and consideration by your committee and the Congress, we feel in coperation with the Corps of Engineers it will take 1½ to 2 years for the planning and design, that is, the foundation and excavation plan and design of the definite project report, and it will take 3½ or 4 years for the actual construction of it.

Mr. MACK. About 5 or 6 years?

Mr. PRICE. About 5 or 6 years. It would be 1959 or 1960 before it would probably come on the line. The Eugene Water Board has been quite aware of this particular requirement and growth, and it has always prided itself on trying to be independent of any Federal system, because it has never recognized, that is, the water board itself has never recognized that the Bonneville Power Administration or the Federal Government had a utility responsibility. The Eugene Water Board has always taken the stand that it will do its level-best to prepare itself to supply its own generation.

Of course, this last year we had to rely on Bonneville to pick up that additional capacity required to get us over the peak. In studying for future generation capacity our engineers studied steam, internal combustion and hydro plants over the Oregon area. We in-

cluded in that a very careful study of the Green Peter project and carried the study along on Green Peter concurrently with our study on Cougar, because we could not tell when we started which would be the better one for our system.

It did develop very definitely that Cougar was the project for us, and that Green Peter, although a very fine project, did not fit and tailor itself to our system as well as Cougar did.

Mr. ANGELL. What is the capacity of Green Peter?

Mr. PRICE. 81,000, is it not, Colonel? I think that is right.

Mr. ANGELL. That is compared with 35,000 in this project plus reregulating dam power?

Mr. PRICE. Yes. It was a much larger and more substantial investment that would have been required, and our load growth, in growing from 5,000 to 6,000 kilowatts per year, indicated it was a little over our heads, so we backed away from that one. There were other reasons, too.

It is the policy of the Water Board to supply power to its customers at a rate as low as possible, consistent with good service and sound financing. There again it has used its right to have general obligation bonds in he past, but never has there been a tax levy of the community to support any of the Water Board's activities. It has been completely and entirely revenue financing.

Mr. MACK. How would you finish obtaining the money for the construction of Cougar Dam and the regulating dam?

Mr. PRICE. We propose on that and have talked to investment bankers and, subject to further determination, it is felt that revenue bonds, let us say a 20- or 30-year term revenue bond at a rate of interest of 3 to 3½ percent, would carry the financing of this project.

Mr. NEAL. May I ask a question?

Mr. MACK. Dr. Neal.

Mr. NEAL. Do you figure it is economically profitable for you to build this and amortize it over a period of 25 years with your bonds? Do you prefer that to having the Government construct this whole project and build the dam and own the hydro powerplant at the end of the construction, to be amortized over a period of 50 years?

It would seem to me in this case when you build this particular property and take the $10 million out of the total construction, that there is a certain amount of money you invest in there that the Government does not receive, and you amortize it in a 50-year period of time. You propose to build this with bonds which you will issue immediately and amortize them over a period of 25 years at a rate of 3½ percent, or something of that nature. It would be really cheaper for the city of Eugene if the Government went in and constructed the whole thing, unless you returned it to the Government in 50 years, would it not?

Mr. PRICE. I do not think so. We have chased that through quite thoroughly. Of course, here again it comes back to policy and the desire of the Water Board to stand on its own feet and not tie itself up and be dependent on any Federal appropriation more than is absolutely fair. We feel it has been its policy in the past to pay as you go. That is why you will notice in the financial statement it has such a very low outstanding debt.

Mr. NEAL. The rates which you charge your users would be subject to the Federal Power Commission, would they not?

Mr. PRICE. No, sir. A municipal utility is not subject to the Federal Power Commission.

They would license the project and determine the economic feasibility.

Mr. NEAL. But at least you would be free to charge an additional consumption rate for the electricity you produce here to justify that difference in cost in carrying the bonds. Is that not true?

Mr. PRICE. We would not want to say we want to raise the rates just so we can extend the terms of the bonds, or the financing period. I would not say that. The policy of the Water Board is to pay off early and as fast as it can, and get these bonds on as short a term as possible, and get them cashed in.

Actually the economics were figured out on the fastest pay-out in keeping our rates the same as they are now, which is very low.

Mr. NEAL. You will keep your rates the same as they are now?

Mr. PRICE. Unless the Bonneville rate would disturb the situation more than we can see. We feel we can maintain our present rates.

Mr. MACK. Are the rates charged by the Eugene Water Board set by a State public service commission?

Mr. PRICE. No, sir, they are not. A municipal utility does not come under a State PUC. We set the rates according to a sound financing and operation schedule. In our case we have an average annual bill or cost per kilowatt hour of 1.1139. It is a cent and 1.4 mills per kilowatt-hour. That is very low as the gentlemen from the East well know. It is very favorable but has been brought about by, we will say, almost frugal management of this utility.

Mr. MACK. Do you have a State public service commission in Oregon.

Mr. PRICE. Yes.

Mr. MACK. It sets the rates of the private companies but not public companies?

Mr. PRICE. That is right.

Mr. ANGELL. How do your rates compare with the Tacoma rates?

Mr. PRICE. I think we are a little bit higher than Tacoma. It has a more favorable rate than we have.

Mr. ANGELL. How do they compare with the private rates?

Mr. PRICE. With the private I think it compares very favorably, for example, with the Portland General Electric. It compares lower than the private utilities in that immediate area, which is Mountain States at the present time. I would say a good 20 percent lower than they are.

I mentioned here that this Cougar Dam was logical, and why we abandoned some of these other projected ideas we had, and why we landed on Cougar as being the most logical for the Water Board's development. I can point some of this out for you. It is discernible on the map. Cougar Dam is located up here 50 miles or so from Eugene. The water flows down and flows through our Leaburg plant and our Waterville plant on its way to the ocean.

This downstream benefit is something that is particular and special to us. We like the looks of it. It is not anything startling but it is those little things that make up the more attractive features of this dam.

You will also find that it feeds into a transmission line that comes right through our service area. On this map and in this light green

color is the water board's present service area of approximately 50 square miles. It runs up here to just about the Leaburg Dam where at this point there is a local co-op. It is called the Lane County Electric Cooperative which serves the customers from this point up to that bend of the river up there.

They are at the present time taking delivery of electrical energy from us at this point. They desire, and we have negotiations under way with them now, to entertain the possibility of giving them a future point of delivery right in the middle of their system, and it is very attractive to the co-op. What was the figure they said they could save by avoiding construction? It was a sizable figure. About $50,000 to $75,000 that they could save in construction as I recall it, if we could give them this point of delivery in the middle of their system.

So this thing here feeds right into us. We have our transmission line existing to the Leaburg powerplant, and in taking off from there and going on up here to the point of delivery to the co-op at this point would be very much better, of course, than crossing on up the river and into our upper river plants that we have proposed and do propose to construct at the earliest possible time. That is the Beaver Marsh project which is the uppermost. I mention it as something that we propose to construct on our own as fast as we can possibly do it. If we can get it on the line in 2 years that is what we propose to do.

It would be about a 30,000-kilowatt peaking plant. With that peaking plant coming on in 2 years, it would tide us over until we can get Cougar on the line, which would tide us over until approximately 1964.

So, we have not found all of the answers, but we are working toward that.

Mr. NEAL. Have you at any time experienced an insufficient amount of water to enable you to get the full production of those dams down on the McKenzie River?

Mr. PRICE. Yes, sir. Low water flow.

Mr. NEAL. Then your extra storage up at Cougar will more or less firm that up and give you continuous all-year-round production.

Mr. PRICE. That seasonal storage is very attractive to us. Yes, sir. That is one of the principal benefits downstream.

Mr. ANGELL. Is that where you get the 10,000 additional kilowatts over the 25,000 which would be obtained by Government operation?

Mr. PRICE. No, Mr. Angell. The additional amount is in the installation of a larger capacity generator and larger flow of water for a shorter period of time. In other words, in the plant we propose to alter the Army's tentative plan with a tentative plan of our own, because we have not had sufficient assurance that we can go ahead on this to spend too much money.

Mr. ANGELL. Will it add storage capacity to increase the capacity of the dams lower down?

Mr. PRICE. These dams are run-of-the-river plants below. They have no storage capacity but that which comes down the river.

Mr. ANGELL. My question is whether the new dam, Cougar Dam, would give additional storage capacity?

Mr. PRICE. Yes, sir. The additional storage releases would come through these and supplement the generation of those plants. Yes,

sir. It would also materially benefit the low flows of the late summer in the river, and that is one of the things that the fish people and recreation people are quite interested in. They like that angle.

In addition to the benefits downstream, of course, as I mentioned we have the transmission line benefit. We are already out 22 miles from Eugene. There is not any other utility transmission line in that area. The closest one is the Bonneville line which comes across in this area here from Lebanon and Sweet Home, and the area across to the Goshen substation, and out this way to the Lookout Point Dam.

That brings up a point which has come up and been passed around a little bit. Mr. Ellsworth touched upon it and I would like to elaborate a little more on it. It has been discussed very readily and freely here. It is that based on the tentative cost allocation, the water board would pick up a check of about $500,000 that would be otherwise charged to a flood-control project. It is solely a flood-control project and would decrease the Federal Government's investment in that project by $500,000.

In addition to that, and the other part of the Federal investment, which is not in the Corps of Engineers' figures, is under the present and past procedure the Bonneville Power Administration has come in and built its transmission lines. That was not included in Colonel Whipple's testimony as to $37,400,000 being the cost.

There is a transmission line which we estimate would cost the Bonneville Power Administration approximately $1,300,000 to get that power to the existing Bonneville net down at Eugene. There we have an additional $500,000, making a net savings to the Government by the water board's participation of $1,800,000.

It is getting a little more practical as it goes along as far as the Federal Government is concerned. We feel that is one of the big points, and we like to stress that.

We find also it is quite obvious that anyone building into this area would have only one way in and that is right up the river valley. They would duplicate or build lines paralleling our lines for 22 miles. That is an utter waste and I think it is for us further evidence as to why the water board was in a very attractive position and almost compelled to get into this thing to avoid such a thing as that.

We had testimony that touched on flood control and other conservation benefits to the local community and the valley. We are not unmindful if we as the city of Eugene can do that and undertake this project and make it more attractive to the Federal Government to get them in there sooner. We would like to see those annual flood-control benefits start accruing in the immediate future and not be delayed very many more years.

It is estimated that the annual average flood-control benefit might be as high as $1,800,000. I believe we have tentative figures that would indicate that as of 1954, based on 1954 prices and the 1954 stage of development of the Willamette Valley, the annual flood-control benefit would be as high as $1,100,000, so you don't even have to look into the distant future to pick out anything like that. It is really there.

The operation of the project would be primarily for flood control and other conservation purposes such as irrigation, pollution abatement, and so forth. That operation is compatible with this powerplant operation. We have worked it out and discussed it with the

Army engineers to the point where we feel we can sit down and enter with them into a very satisfactory arrangement and agreement. We will not at any time reduce the prime purpose of that project, which is flood control and, of course, irrigation and its counterparts.

It is a special advantage to the water board also, because of the concurrent operation that is possible with other water board plants.

I mentioned downstream benefits. Now we can look upstream. It was mentioned in here the upper McKenzie area has a natural advantage of its own, in the ice that forms in the wintertime. That is a very wonderful equalizing or regulating pond in itself. That water comes out in a fairly constant flow.

During the time the water is coming out of this area we want to impound water in the Cougar project. It can be done because we are getting good flows here and continuous flows and can operate that plant and fill this one. We can interchange Cougar and Beaver Marsh for instance, in our load curve. Instead of a semipeaking plant we can operate it a very short time during this filling period.

A full reservoir is what you know we are all after, to get the extra head. We do have some complications on that. We have to maintain minimum releases for conservation and streamflow below, and have provided for that in our studies. It is only going to take, as near as we can see, this slight modification of load factor of the Corps of Engineers' plan to make this thing particularly suitable or adaptable to the water board's requirements. The first item, of course, is the installation of the 37,500-kilowatt installed power, operating it as a semipeaking plant with a 40-percent load factor. Of course, during this interchange period we can operate at a lower load factor while we are filling the reservoir, but basically it will be semipeaking at 40 percent.

The reregulating dam will be required because of the sudden flows. Having falling water, we thought we had better take advantage of that and install a generator at the reregulation dam and get another 1,500 kilowatts out of that. That will be base load.

In changing the Army plan we find if it did not build any power facilities or provide for future power there, it is our feeling that about 45 feet of the height of this project could be eliminated because we have built into this thing a 47,000-acre-foot pond for flood-control power storage. This power storage in there is to firm up in critical years our power production, and, of course, that is worth money to us. So we can very well afford to pay for the extra height of the dam. This additional storage area in the reservoir could be used in certain circumstances for flood-control protection. Anyway, it is not going to minimize that.

Under this partnership or joint venture we are proposing we find, of course, there are mutual advantages and obligations on both sides. We find and are proposing that the waterboard shall construct, own, and operate at its own expense, the power tunnel and penstock. We have here, of course, the water conduit through the penstock and powerhouse which we felt would be our own.

The reregulating dam which is indicated in the drawing down here about 2 miles would be strictly the water board's responsibilty, and it would pay the entire cost.

The transmission, of course, would be the water board's, and we would pay for it.

We would share the cost of the federally owned dam and reservoir too under the method of allocation described to you by Colonel Whipple. We find in this case not only are we paying the incremental cost of the dam and the certain control works, but we are paying a fair share, or an allocated share of these jointly used facilities.

We would also share proportionately in the cost of operation and maintenance of the dam and reservoir in part. It is only a small amount, but it is a benefit to the Federal Government to have a partner in there sharing. It is not anything that is strictly a cash deposit, but something that would continue over the years.

We feel an operating agreement to be worked out with the Army engineers on this project would have to cover, of course, the flood control and conservation releases that would come out of there. We have talked it over and we feel we can work out a satisfactory arrangement for the working out of the prime purpose of flood control in the dam.

Of course, the operating agreement would very definitely define the responsibilities of each of the parties. It is going to take a certain amount of mutual understanding and confidence between the water-board and the Army and the Federal Government. There is no reason for us, certainly, to doubt the integrity of any of the officials we have had any dealings with. We feel quite confident we can enter into a very satisfactory mutual agreement.

I mentioned the economic feasibility of this. We have the financial responsibility. We can assume that and we can meet the obligations of financing this construction and feel there is no difficulty on that.

The water board, of course, as brought out before, and I emphasize again, is not dependent on the sale to any other utility of this power, because as the chairman said, they are growing right with us. We keep pace with our future load growth.

We do not have to use any Federal transmission facilities to utilize this project. There again is the idea of not duplicating facilities and we would not be sending over the Bonneville lines to get the energy from Cougar Dam into the Eugene system.

We feel on this funding and financing that the contribution toward construction costs could be geared to the Federal Government's construction of the project. We would make annual contributions as the progress of the work went ahead on the project.

I mentioned, of course, the revenue bonds, and feel that that is most feasible.

We have prepared and submitted to the Oregon State engineer an application for an appropriation of water at this Cougar Dam site. We referred definitely to possible authorizing legislation for that. In addition to that we have submitted an application to the Federal Power Commission for a preliminary permit which would cover this period of engineering study or this definite project report phase of the planning and engineering.

Those two applications, of course, are a prerequisite. Their issuance would be a prerequisite to going into this. And, of course, both are dependent on the successful authorization of this partnership or joint venture.

The net results of this partnership are really this: That this important flood-control project would be completed with a minimum

delay and we can take advantage of these annual savings on flood damages that previous witnesses have given you.

There is a very great need for power supply in the Northwest. And by our adding to this system, or to our own system, we are adding to the entire Northwest proposition because we are an integral part of the hookup and we will feed power into the Bonneville system at certain times and take from them at others.

So it is not a case of this power going just to Eugene. If it would be surplus to us it could be available to the Northwest under certain circumstances if it was needed.

On the local contribution, of course, we are paying all costs attributable to the power facilities and paying the fair share on the joint items and a fair share of the future operation and maintenance which would tend substantially to reduce, we feel, the Federal appropriations which would be required in the construction and operation of the project at Cougar Dam.

We submit that if this legislation meets with the committee's approval and will be adopted by the Congress, that we are very anxious to get going. Of course, as I indicated before, we will be in here the first day we find out we can, and ask for planning money to start with the engineers and develop some engineering and designing plans.

Mr. MACK. Are any fish problems of any consequence involved in the construction of this dam?

Mr. PRICE. The Army engineers settled all of the fish problems on the Cougar Dam project. That was taken care of in their overall basin plan of development. Is that right, Colonel Whipple?

Colonel WHIPPLE. We do not anticipate any great trouble on this project, sir. We have not had any objection on it. In fact the regulation will benefit the fisheries on the McKenzie River, which is, of course, one of the finest fishing streams in the Northwest. The fish people are very happy to have the project built.

Mr. ANGELL. Will it be necessary to install fish ladders?

Colonel WHIPPLE. No, sir.

Mr. PRICE. It will be most impractical. This is 425 feet high.

Mr. MACK. Are there any questions from members of the committee? (No response.)

Mr. MACK. Thank you very much, sir, for your testimony. Mr. Ellsworth, will you present your next witness?

Mr. ELLSWORTH. Mr. Chairman, we have only one other witness and at the conclusion I would like to make a very, very short statement myself. But at this time Mr. Thomas Delzell, who is chairman of the board of the Portland General Electric Co., is here and I would like to present him to the committee to make such observations as he can or wishes to on the views that the privately owned power industry may have on this project.

Mr. Delzell.

Mr. MACK. The committee will be pleased to hear Mr. Delzell.

Mr. ANGELL. I would like to say Mr. Delzell also comes from my congressional district and is one of our prominent citizens there, and one on whom we rely. He is chairman of the board of the Portland General Electric Co. I am certainly happy to introduce him to my colleagues on the committee. I am sure they will be glad to hear his recommendations on this project which is so vital to the Northwest area.

STATEMENT OF THOMAS DELZELL, CHAIRMAN, BOARD OF DIRECTORS, PORTLAND GENERAL ELECTRIC CO.

Mr. DELZELL. Thank you, Mr. Chairman and Mr. Angell and my good friend Harris to the right. My name for the record is Thomas W. Delzell. I am chairman of the board of the Portland General Electric Co. which is a pioneer electric public utility in the State of Oregon. In terms of revenues and customers it is probably Oregon's largest. It serves a substantial part of Portland and most of the lower Willamette Valley Basin, perhaps 100 miles long.

We have in the neighborhood of 220,000 customers, of whom about 200,000 are residential and rural. Within the area served by the company probably resides at least half of the population of the State of Oregon.

I want to say at the outset we have no objection whatsoever to the city of Eugene's plans. Quite the contrary is true. We think it should go forward, and trust that this committee will look favorably upon their proposed legislation, H. R. 7815, and their proposed method of working it out.

I might point out very briefly that the Pacific Northwest and Oregon, which is a part of it, is quite unique in the field of electric power. In the old Oregon country, which embraces Oregon and Washington and Idaho and a very small portion of Wyoming and western Montana, that is synonymous also for all practical purposes with the Columbia River Basin and is reasonably synonymous with the service area of the Bonneville Power Administration, particularly the western half of the area I have described—but in that area we have had a tremendous growth, second perhaps only to California. That is particularly true of the States of Oregon and Washington.

We are unique in that we have a three-way responsibility for electric service and it is shared between the electric companies, of which there are a number, a number of municipal agencies, and the Federal Government. It is unique in that we have what is known as the Northwest power pool, which is a voluntary arrangement of these several agencies to work together for their own good and the public good, and with quite amazing savings to themselves in the public interest.

At the present time the total power load in that area generally of installed capacity is very close to 7 million kilowatts.

To illustrate this 3-way combination I might indicate for the record that the Federal Government presently has an installed capacity of slightly over 3 million kilowatts; the municipal agencies have about 1,125,000 kilowatts, and several electric companies have some 2,630,000 kilowatts as of a couple of months ago.

Mr. MACK. Is that all hydroelectric, or hydroelectric and steam?

Mr. DELZELL. Virtually all of it is hydroelectric. Not altogether. There are about 500,000 kilowatts of steam installed capacity in the general area I described. A portion of it is in the west in Oregon and Washington and a portion is in Montana.

Mr. ANGELL. Will you repeat again what ratio exists between public power and private in that pool?

Mr. DELZELL. The local public agencies, such as Eugene, Seattle, Tacoma, and a number of PUD's and so forth, and the electric companies, have just about one-half of the 7 million kilowatts.

Mr. ANGELL. And the Federal Government the remainder?

Mr. DELZELL. And the Federal Government has the remainder, Mr. Angell. The electric companies have to have a little bit more installed capacity than a municipal agency does.

Mr. ANGELL. When these new plants come into production like the dams at McNary, The Dalles, and Chief Joseph, then the Federal Government's share will be considerably larger, will it not?

Mr. DELZELL. I would think so. Of course, other plans are in the making also, but I think your observation will be correct.

Mr. ANGELL. The private companies also are developing additional kilowatts.

Mr. DELZELL. We hope to and we will. In the area as a whole the figures may vary and you can get slightly different figures, but for all practical purposes we need in the neighborhood of 600,000 kilowatts annually of new capacity. Perhaps it is 575,000, but it is in that bracket. Most of that 575,000 or 600,000 kilowatts of new capacity is really needed in what we call the west coast of the Northwest power pool, which means north and central Oregon and the State of Washington where the rate of growth has been more rapid than it has been a little farther east in the eastern half of our Northwest power pool.

It is a big job and in our opinion, and in my opinion it will take the combined cooperative efforts of all three agencies.

We will need to get such Federal funds as the Congress in its wisdom allocates to the Northwest for new projects; and we will need all of the projects that can be built by the electric companies in cooperation with the Federal Government or alone; and we will certainly need, by the same token, all of the plants we can get constructed by the city of Eugene or other municipal and quasi-public bodies.

So, coming back to Eugene on the Cougar Dam proposal, we think it is highly desirable that it be permitted to go forward if it is willing to do so—and obviously it is willing to do so—and we think it is able to do so.

Eugene is a fine city that has had municipal ownership for over 40 years and it is well managed. Their net worth from the electric system alone I believe is in excess of $12 million. They have only a nominal amount of debt, so I think there would be no question of their meeting or carrying this part of the financial responsibility.

Of course, to the extent that they can put in 37,500 kilowatts at Cougar Dam they will add that much in resources to Oregon and the Pacific Northwest which needs this power very much in order to avoid power shortages.

Additionally, we would be interested, in the Portland General Electric Co., in the sense that as I said, we serve most of the lower Willamette Valley, and, of course, to the extent that flood-control benefits are realized to the tune of about $1,800,000, it will be represented in no small part in benefits to the people that we serve.

But we are primarily interested in it in the region as a whole. However, it does not have that practical aspect. Also the completion of Cougar Dam will be another step toward the completion of the authorized Willamette Valley project with recreational benefits and some fish and irrigation benefits.

I think it is logical, by the way, in conclusion, for Eugene to develop more, since you have been shown here on the map that they have already other developments on the McKenzie River. This project, in

fact, is in their own backyard and it is probably more logical if they built it than anybody else I can think of. My own thought is, God bless them in their efforts, and I am sure I speak the feelings of the other major electric utilities in the Pacific Northwest.

Mr. MACK. Have you completed your statement, Mr. Delzell?

Mr. DELZELL. Yes, sir.

Mr. MACK. You said that 600,000 additional kilowatts of electricity are needed annually in the Pacific Northwest. We now have under construction the Chief Joseph, the McNary, and the Dalles Dams which altogether will give us about 3 million additional kilowatts, which will fairly well take care of our power situation until 1959 or 1960.

Do you believe that the Federal Government should make a new dam start in the Columbia Basin in order to assure ample power after 1960?

Mr. DELZELL. I do believe it and I hope very much they can. But in addition to a Federal start it will require more than that, in my opinion.

Mr. MACK. I observed that Secretary McKay the other day announced he and the Secretary of the Army had appealed to the Secretary of State to reinstitute negotiations for the securing, the start of Libby Dam which would add by storage and installations about 1,500,000 kilowatts for the region. If the Government gets Libby started now, of course, it will be 1960 before we actually will be able to put power on the line from that installation.

Mr. DELZELL. That is correct. Most of the large multiple-purpose projects as you know take 5 or 6 years to construct. So, looking toward the early 1960's it is very important a number of larger projects get underway very promptly. Whether they are built by the Federal Government or municipal or private utilities, or some combination, the need is the same no matter how the partnership finally develops.

Mr. MACK. Does your company have any hydroelectric installation in the Northwest now?

Mr. DELZELL. Yes we do.

Mr. MACK. How much do you generate from that power?

Mr. DELZELL. About 120,000 kilowatts. We purchase most of our power from the Federal system and the Northwest power pool.

Mr. MACK. I see. Mr. Angell.

Mr. ANGELL. I understand from your testimony, Mr. Delzell, you are rather favorably inclined to the construction of the Libbey Dam project.

Mr. DELZELL. Yes, sir. I heard about it after I arrived here, Mr. Angell, but it seems to me a very worthwhile suggestion, and I hope the international joint commission can work out the difficulties and make whatever arrangement is fair with Canada, and get that project under way without undue delay.

Mr. ANGELL. In the development of hydroelectric power on the Columbia River and other navigable streams of that size and capacity what is your idea with reference to some overall control if the Federal Government steps out, so as to insure that the power developed will be shared equally by all portions of the area served regardless of State lines?

Mr. DELZELL. First it has been my personal experience for a number of years past that I think the underlying priority should go to

residential and rural customers of the general public, wherever they are gathered, and as fairly as it can be done. It can be done on the basis of customers or perhaps State lines for the benefit of the customers within the States; but the end result should be one of equity in my opinion.

Mr. ANGELL. It is your view, is it not, that there should be some overall control in the entire region regardless of State lines so that all areas will receive equal treatment there?

Mr. DELZELL. As nearly so as possible indeed.

Mr. ANGELL. Of course now under the Federal operation and control in the Bonneville Power Administration distribution, that is insured by reason of the Federal operation.

Mr. DELZELL. I think that is another aspect but I am not sure I fully agree with you.

Mr. ANGELL. It is true, is it not Mr. Delzell, that the private utilities and municipalities and the PUD's and the Federal Government all are united and working out agreeably in this overall program and pooling the power in the distribution of all of the power that is developed in the Pacific Northwest area?

Mr. DELZELL. I think it has been true for a number of years past. They have worked together at the operating level in an amazingly efficient and cooperative manner. I think it is now true the several groups are doing their level best in the way the people function to get together for plans for joint ventures with and without the Federal Government. Mostly with, because of the flood control and navigation projects. And out of these several plans I feel quite confident something worthwhile will evolve.

At the moment it is in a state of flux. We have plans for Priest Rapids and Puget Sound in Oregon, but that is the way we can function and I think something worth while will come out.

Mr. ANGELL. I see your company has made a proposal with reference to the John Day Dam. What is the status of that on a partnership arrangement?

Mr. DELZELL. It is pretty much in the idea stage like I described with most of these others.

Mr. ANGELL. That is a partnership proposal, or something along the line of this that we are considering.

Mr. DELZELL. It involves a great deal more money.

Mr. ANGELL. It is a much larger project.

Mr. DELZELL. That is correct, and it involves a different allocation to power because flood control is only incidental on that particular dam.

Mr. NEAL. Does flood control enter into that project to the same degree it does here?

Mr. DELZELL. No, sir.

Mr. MACK. There is a great deal of navigation in that project, is there not?

Mr. DELZELL. That is correct.

Mr. ANGELL. That is all, Mr. Chairman.

Mr. NEAL. I just want to ask a question.

Mr. MACK. Mr. Neal.

Mr. NEAL. You operate a private utility?

Mr. DELZELL. Yes, sir.

Mr. NEAL. And you produce your power largely by a power dam. You don't develop much steam power, do you?

Mr. DELZELL. We have installed capacity of approximately 120,000 kilowatts out of the 500,000 in the Northwest.

Mr. NEAL. One-fourth of it.

Mr. DELZELL. One-half of our capacity is steam power, but in the Pacific Northwest most of our rates are geared to the low-cost power, and steam is used only as a standby.

Mr. NEAL. Are you able to compete with such projects as this from the standpoint of rates to your customers?

Mr. DELZELL. We do a very satisfactory job we think.

Mr. NEAL. And still are making money?

Mr. DELZELL. We try to make just enough to give a fair return to our stockholders. We are yielding about 5¼ percent to the common-stock holders at this time.

Mr. MACK. Are there any other questions?

Mr. NEAL. That is all.

Mr. BUSH. Mr. Chairman.

Mr. MACK. Mr. Bush.

Mr. BUSH. Your rates are set then by the public utility commission?

Mr. DELZELL. That is correct, sir.

Mr. BUSH. And you are a private utility and therefore are under the jurisdiction of the public utility commission there?

Mr. DELZELL. That is correct.

Mr. BUSH. I think you made a fine presentation. Being a private utility I was glad to see the cooperative feeling and spirit that exists here to get this power that seems to be so badly needed. It is wonderful I think. I do not believe we could do that here in the East. They all want to get more.

Mr. NEAL. If the gentleman will yield, we ought to compliment these representatives of the great Northwest for their progressive policy and for their cooperative policy. I think it is very fine.

Mr. MACK. Thank you Mr. Delzell for your testimony. It has been very helpful.

Mr. DELZELL. Thank you, sir.

Mr. MACK. Mr. Ellsworth.

Mr. ELLSWORTH. That just about concludes the hearing on this bill, H. R. 7815, Mr. Chairman. But before the committee adjourns the hearing, and while I have this opportunity I would like to direct the attention of the committee to another bill, H. R. 8661, which has to do with the project known as the Green Peter flood-control project on the Santiam River, which is a few miles—some 30 to 40 miles—north of the McKenzie.

It happens that the flood-control urgency there and the future so far as the flood situation is concerned is almost identical with the testimony you have heard regarding the need for the dam on the McKenzie at Cougar Dam. In other words, on one branch of the Santiam River the Detroit Dam has been constructed, and that branch is under control. The other branch, the South Santiam, where the Green Peter Dam is located or proposed as a part of the flood-control system, it is now uncontrolled. Therefore we have the same situation that was pointed out earlier today, where in the delta area near where the two rivers come together the land is being eroded away unusually rapidly due to the fact that one river is higher than the other both in actual

height of the river bed but also in the flood stage. The controlled river allows the uncontrolled river to come down through the area in a very destructive way and at a very destructive rate.

Mr. MACK. The Green Peter project is not yet an authorized project; is it?

Mr. ELLSWORTH. It is in the same identical status as the Cougar project. It is authorized but not authorized for power. The bill I have just referred to is a bill to provide almost the same basic fundamental idea as discussed here with reference to the cooperation with the Federal Government by local interests.

However, the situation so far as power is concerned on the Santiam River at Green Peter is not quite similar to that on the McKenzie for the reason that on the McKenzie the only utility conceivably available or interested in the partnership plan is the Eugene Water and Electric Board. That is not true with reference to the Green Peter Dam. That dam would be within reasonable distance from the Bonneville lines or the lines of the Mountain States Power Co. So the bill, H. R. 8661, provides that the power facilities at Green Peter Dam and White Bridge Dam and the re-regulating reservoir with power facilities may be provided by a licensee in accordance with the terms of the Federal Power Act.

What that means is if this committee approves, and if the Congress enacts this bill, the principle of partnership for Green Peter will be established as a living thing, but then it will be up to either a private utility or a local municipal operation, or any other, to go before the Federal Power Commission and secure a license to participate as a local company or a local utility in the Green Peter Dam construction. That right is limited to 1 year, I mean, in the bill as it has been written. Unless an application for a license to construct power facilities in cooperation with the Government at Green Peter is filed within a year, then of course the power conferred in H. R. 8661 will end.

I mention it at this time for this reason: I am hopeful—partly due to the fact that the executive secretary of the Willamette Basin Commission, Mr. Ivan Oaks, is scheduled to come to Washington about the middle of May—I am hoping the reports which are requested by the committee can and will be filed with the committee so that you might be able to schedule a hearing on this other partnership bill near the middle of this next month.

If it can be done I am sure it will be appreciated greatly by the local interests.

Mr. MACK. What is the productive capacity of the Green Peter project?

Mr. ELLSWORTH. As I recall it—and Colonel Whipple will have to correct me if I am wrong—the installed capacity I believe is to be 81,000 kilowatts.

Colonel WHIPPLE. Yes, sir; I think that is right.

Mr. MACK. Is there another dam in connection with that project?

Mr. ELLSWORTH. That is right. It is known as White Bridge, which would be a reregulating dam, which is not authorized at all.

Colonel WHIPPLE. It is 81,000 kilowatts, plus 15,000 for White Bridge, which is the reregulating dam.

Mr. MACK. In other words, 96,000 kilowatts for the 2?

Colonel WHIPPLE. Yes.

Mr. ANGELL. What is the overall cost?

Colonel WHIPPLE. The overall cost is about $58 million for the 2 of them, including the reregulating dam.

Mr. MACK. But without power?

Colonel WHIPPLE. No, sir; that is the total, including power.

Mr. ANGELL. What portion of that would be allocated to power?

Colonel WHIPPLE. We do not have those figures yet. In fact, we do not have those allocation studies advanced as far as we have in the case of this project.

Mr. MACK. The power installations have not been authorized in this dam?

Colonel WHIPPLE. It is exactly the same status as Cougar Dam. In both cases the plan was made and originally the project was authorized for flood control and water conservation alone. Then the plan was made to include the power, but Congress never did authorize the action on the basis of that report.

So, in both cases the power has never been authorized but the dam for flood control and water conservation has been authorized for several years.

Mr. NEAL. Is there a dual interest similar to the one we have at Cougar that would depend on some private or public utility to develop the power project, or is it purely a Government project?

Colonel WHIPPLE. That, I understand, is what Congressman Ellsworth is proposing.

Mr. MACK. If this dam is authorized, then either a private or public power body could come in and request an opportunity to secure a license to build the power phase of the dam.

Mr. ELLSWORTH. That is correct.

Mr. MACK. Under the law does the public utility have a prior right over the private utility before the Federal Power Commission?

Mr. ELLSWORTH. I could not answer that. Is there someone here from the Power Commission who could answer that question for the chairman?

Mr. CRUM. I am Thomas Crum. I am an engineer in the Commission on the individual license projects, Bureau of Power.

Mr. MACK. The committee will be pleased to have your statement as to whether a public utility has preference in these applications for a license to install hydroelectric capacity.

Mr. CRUM. My understanding of it is that section 7 (b) of the Federal Power Act states that a municipality has preference in the proposed development at the same site, provided the projects are equally well adapted.

Mr. NEAL. But private power is not ruled out?

Mr. CRUM. No. It is not ruled out necessarily. But if the projects are equally well adapted the municipality will be given preference under section 7 (b) of the Federal Power Act.

Mr. ELLSWORTH. Thank you very much, Mr. Crum. In view of the fact as I understand it from just informal discussions regarding the possible cost allocation and the participation of the local interests in constructing and paying for the construction of the power facilities at the Green Peter Dam would be rather large—I think the percentage might run as much as 50 percent—it is not known for certain whether a privately owned utility would want to undertake that investment,

or whether there would be some publicly owned organization that would want to do it.

Therefore, the legislation is strictly open end. I should also point out, I think, that the primary interest that I have in the Green Peter project is to secure the flood protection the dam will afford.

There are two bills before your committee which would accomplish that result. One is the bill which we discussed 3 or 4 weeks ago to simply authorize power in the Green Peter Dam and the construction of White Bridge as a power-reregulating dam. That is one method the committee may use to secure the flood-control protection.

The other would be the approval of this bill I have just spoken of. But the local interests are exceedingly anxious that something be done to protect this situation which has developed very, very badly as a result of the project being out of balance, with 1 dam having been constructed on 1 stream and none on the other.

May I at this time thank you and the committee for your courtesy in hearing all of our witnesses, and we certainly hope for your favorable consideration of the project.

Mr. MACK. Mr. Ellsworth, the committee is very anxious to cooperate in every way possible in the consideration of these projects. However, the committee does have coming before it a considerable number of flood-control projects in the immediate future. We will have to look over our schedule very carefully to see if it can find a place for the consideration of this bill which you mentioned.

The Chair will ask Mr. Ellsworth to see that the statements of the the two governors, for which permission has been given for their insertion into the record, are furnished at the earliest possible moment so that we may have these hearings printed preparatory to their consideration in executive session of the committee.

Mr. ELLSWORTH. I am glad to say that I have just now handed the clerk the statement by Governor Patterson. He was able to prepare it before he left town; and the statement of the Governor of Idaho is also in the hands of the clerk.

Mr. MACK. A statement has been submitted by Representative Sam Coon reiterating his interest in this legislation which will be received for the record at this point.

STATEMENT OF HON. SAM COON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

PARTNERSHIP DEVELOPMENT OF COUGAR DAM ON THE M'KENZIE

Mr. Chairman, I wish to urge again that your committee give careful thought and prompt action to the proposal that would be authorized in H. R. 7815 for development of Cougar Dam and Reservoir on the McKenzie River, with participation for power by the city of Eugene.

As I have stated before, this project is not only important to western Oregon, it is important to eastern Oregon and to the whole Nation as a pioneer project in working out a new, and we hope, a better program for developing our rivers. We need to get this project under way as soon as possible, in order to test this new power policy, to gain experience in using it, and to demonstrate the feasibility which we believe it has.

We in this administration favor government that is closer to the people wherever it is better government. We favor economy in the use of Federal funds, wherever true economy can be practiced. We favor as much freedom of individual enterprise and initiative as the public interest will allow.

The Cougar project shows promise of setting a pattern of bringing government closer to the people by allowing the city of Eugene to carry a part of the responsibility for the development. It promises also to set a pattern of economy in the use of Federal funds through substituting local money where it appears this money can be well spent. It should encourage local enterprises and initiative by showing that the Federal Government does not intend to saddle the Northwest with a big Federal monopoly, but invites local cooperation and support.

Even though the proposal looks promising, however, I would urge that this proposal and all proposals like it be studied with care to insure that they do not give undue advantage to any special group, public or private. If a partnership is a good partnership, it must be fair to everyone concerned. If we later vote to authorize an interstate compact for power development, it must be because we believe a compact will be in the best interest of all the people.

This administration and this Congress are pioneering new ideas and ways of doing things in many fields. That is what we were elected to do.

We must expect everything we do in the field of water and power to be measured on the yardstick of wise and farsighted resource development. It is not enough only to aim at doing the job as well as it has been done in the past. If we are to measure up to what is expected of us, we must do it better.

EUGENE, OREG., *April 28, 1954.*

Hon. RUSSELL MACK,
House Office Building, Washington, D. C.:

Re Cougar Dam hearing: So that Eugene rate payers may not be saddled irreversibly with power rates substantially higher than what BPA would charge for power EWEB can get from BPA under public preference clause for next 15 years, I request that your subcommittee examine EWEB figures to determine whether their power will be sold for less than 4 mills per kilowatt. Cougar's flood control function having been justifiable approved by Army engineers and Congress after full public hearings in Lane County, it now seems imperative in the interests of fairness that the so-called partnership cost allocations be the subject to such hearings here in Lane County where EWEB rate payers live.

I respectfully request that you and your subcommittee arrange for these on-the-spot hearings on the grounds that, since the addition to Cougar Dam of power may mean unnecessarily high rates for Eugene rate payers as well as a breach of BPA's outstanding successful integrated development of the Northwest's power resources, Lane County residents deserve an opportunity to hear and be heard without the burden of a trip to Washington.

CHARLES O. PORTER, *Eugene, Oreg.*

Mr. MACK. The Chair directs that the hearings of today be printed promptly so that this bill can be considered at a very early executive session of the subcommittee.

If there are no further witnesses this hearing is concluded.

(Whereupon, at 4:30 p. m., the hearing was concluded.)